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OCCUPATIONAL ACCIDENTS IN QUEENSLAND: GENERAL CHARACTERISTICS OF COMPENSATED OCCUPATIONAL ACCIDENTS. INTRODUCTORY PAPER.

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Objects of Investigation.

PALMA (1958) has recently pointed out that accurate statistics are necessary for successful accident prevention, and to increase the supply of such statistics for this geographical area is the overall object of this survey. "The safety man is interested in prevention but first he must find out what he has to prevent" (Desnoyers, 1947). The investigation has been a joint endeavour by the staffs of a university and a State department, and is still continuing.

In greater detail the objectives are as follows: (i) to show the general characteristics of those occupational

accidents occurring in Queensland which are sufficiently severe to warrant the payment of workers' compensation (this object is covered in this paper, and the data herein are supplied to provide background information for further, more detailed investigation); (ii) to describe in some detail the epidemiology of certain common types of accidents, for example back injuries and injuries resulting in long periods of disability; (iii) to study the causes of accidents as they have actually happened in certain specific industries.¹ Leaders of each industry—in fact, in many cases, each employer—must know its or his own specific problems. It has been said that in accident prevention the rifle rather than the shot-gun should be used (Kent and Pershing, 1952), and epidemiological techniques are particularly useful in defining the specific target against a background of platitudinous generalities.

Queensland and its Industry.

Queensland is situated in the subtropics and tropics and has a population of approximately 1.5 million people. Of these, 540,300 were in employment during the year 1955-1956, and of this number 431,700 were employees and therefore eligible for the benefits of workers' compensation. Of these employees, approximately 100,000 were females. Primary industry is all-important—resulting in a production of £192,000,000 compared with a factory production

¹ Since this was written the State Department of Labour and Industry (Queensland) has taken up this aspect of the matter with a large-scale investigation.

of £138,000,000 in 1957-1958 (Commonwealth Bureau of Census and Statistics, 1957 and 1960). The State has the lowest factory production by value per head of population in Australia. Of this factory production £45,000,000 came from works processing primary products—for example, meatworks, sugar mills, sawmills and so on—while £38,000,000 came from "sheltered" factories (establishments, such as garages, bakeries and laundries, producing goods and services which can be done only on the spot); and only £55,000,000 came from competitive or conventional manufacture—that is, the production of goods which may be manufactured elsewhere and which are the products which we usually associate in our minds with secondary industry. What is more, although approximately one-sixth of all people employed are engaged in primary industry, over half of these are self-employed, so that the actual employees in primary industry number only about 20,000 in full-time employment and perhaps as many again in part-time employment. Therefore over half of those in primary industry are not covered by workers' compensation benefits.

Factories in Queensland tend to be small in size. In the United States of America one-third (or thereabouts) of all factory workers are employed in establishments with 1000 or more employees (United States Department of Commerce, 1956) and in Britain the similar statistic is 27% (Central Office of Information, 1959), but in Queensland only 6.5% of factory employees are in this category. In 1955-1956 there were in Australia 73 factories with 1000 or more employees. Only four of these were in Queensland, although it has one-seventh of Australia's population (Commonwealth Bureau of Census and Statistics, 1958).

These data indicate that Queensland is an industrial area in which there are many self-employed people in primary industries, in which the workers in secondary industries often engage in heavy work of a seasonal nature, and in which factories are small in size. This is a notoriously bad background for accident prevention, for both the small employer (New York State Department of Labour, 1950) and the farmer (Editorial, 1951) are particularly vulnerable; the large organization, on the other hand, has enough accidents and enough resources to enable it to discover the causes of accidents in its own sphere. After that, where there is a will in the matter this leads to impressive accident reduction (Norgard, 1959).

Workers' Compensation.

All employees in Queensland must be insured against occupational accidents—a term which includes disease related to work. (Diseases associated with mining are an exception to this, being treated in a separate category.) Compensation is granted for all actual working time lost except for the shift in which the accident occurred. Even when no time is lost—that is, "no disability" is incurred—a claim may be made in respect of medical expenses incurred in the treatment of an accident which happens in the course of the individual's occupation. In this State there is only one authority entitled to accept workers' compensation insurance—namely, the State Government Insurance Office, Queensland. The latest report from that office (State Government Insurance Office, Queensland, 1960), for the year ended June 30, 1960, states that premiums received in that year amounted to £5,460,113, claims numbered 61,504 and compensation payments amounted to £4,721,304. The total number of employees in Queensland in June, 1958, was approximately 433,000 (Commonwealth Bureau of Census and Statistics, 1960). Since the total occupational accident costs—direct and indirect—are said to be four to five times the premiums paid (Kinnish, 1949), this brings the annual bill to between £20 million and £25 million, or between £13 and £16 per head of population. This is in keeping with another estimate (National Safety Council of Australia, 1960) which considers that the overall Australian cost from the same cause is £160 million per annum. The economics of the situation are therefore quite formidable—as they are in the sequel of all accidents, irrespective of the

cause. It will be noted that the foregoing premiums and out-goings do not include those of accidents in the large group of self-employed—for example, farmers.

Methods.

During the two years from July 1, 1955, to June 30, 1957, 115,416 workers' compensation claims were filed with the State Government Insurance Office and from these, 32,994 files were sampled for analysis at various times between 1956 and 1958. It was difficult to obtain a true random sample, since claims made by people with long periods of disability tended to be "in action" away from the central storage. A good deal of resampling was necessary. When the task was finished verification of the sample was effected by comparing several categories—such as the percentage of accidents sustained on the way to and from work—with similar categories appearing in the annual reports of the Commissioner for Insurance. Only a few such comparisons could be made, but all proved satisfactory except in respect of the average period of disability—a comparison rendered difficult owing to the fact that our results in this regard were expressed in terms of the total number of days for which the person was disabled, whereas the Commissioner, to facilitate his financial transactions, considered disability in terms of the number of working shifts lost. The relationship is complex, and it is not simply a matter of equating five working days to seven total days in a week. However, eventually it was shown that in a random sample of our 1955-1956 series, a claimant had an average loss of 17.74 working days compared with the Commissioner's figure of 18.4 days, and that the discrepancy was due to the absence of a small number of claims of people with excessively long periods of disability. In respect of such accidents our report is therefore not a true picture. However, a special paper in future work will be devoted to such claims.

The 32,994 claims were then divided into two groups, A and B. The former was an exact one-in-five sample of accident claims intimated in the financial year 1955-1956, stratified so that it contained not only one-fifth of the total claims made in the year 1955-1956, but also one-fifth of the claims made in any one month. Since so much of Queensland's industry is seasonal it is most necessary to follow this procedure. This sample consists of 11,524 claims. In future work it will be used whenever industries, or perhaps climatic factors, are being considered.

The second group (B) consists of 21,470 claims. It is made up of the 1955-1956 surplus left over after the one-in-five selection had been obtained by means of mechanical means of rejection, plus sampling from the year 1956-1957. Material from group B will prove useful for extending information about the nature of accidents in general and of certain specific types of injury—for example, "bad backs".

Then from groups A and B we removed records of the following: (i) accidents which had happened while the person was travelling to and from work (this eliminated 1172 patients or 3.55%); (ii) occupational diseases—mainly cardio-vascular and skin complaints (this eliminated 915 patients); (iii) deaths (this eliminated 58 patients).

The two groups left were A₁ (with 10,747 claims) and B₁ (with 20,102 claims), containing a total of 30,849 claims. These were analysed separately in respect of various accident characteristics and the results in all aspects showed similarity, except that B₁, dealing mainly with accidents in 1956-1957, showed an average period of disability of 21.2 days (total time lost) as compared with 20.2 days for sample A₁. However, the explanation for this can probably be found in the average number of working days of disablement for non-fatal injuries recorded in the annual reports of the commissioner. Here, without any change in legal policy or interpretation having been made, a good deal of variation is found in succeeding years. Thus in 1954-1955, 18.17 days was the average period of disability; in 1955-1956 it was 18.44 days; in 1956-1957 it was 20.59 days; in 1957-1958 it was 21.76 days; in 1958-1959 it was 20.41 days; and in 1959-1960 it was 17.89 days.

In view of the similarity between A₁ and B₁, these two groups have been combined for presentation in this paper, except in Table VI, in which the average period of disability is correlated with age. To save space no differentiation is made between male and female patients except in that table, since the number of females involved is only 1368 (4.4%)

out of a total of 30,849 in group A₁ + B₁, although they make up approximately 20% to 25% of the employee population.

Lack of space prevents our recording details of sampling methods, techniques of verification and statistical analyses. When the latter were necessary they were done. In recording accidents in this investigation we have followed recommendations laid down by the Standards Association of Australia (1952).

Results.

The Time of Occurrence of the Accident.

Of the 30,849 accidents considered, 79.71% (24,591) happened between 8 a.m. and 5 p.m. on week-days, a further 10.97% (3383) occurred outside those hours on those five days, 5.97% (1843) occurred on Saturdays and Sundays, and in the case of 3.35% the time was not stated. In all 27,974 accidents occurred on the five week-days, distributed as follows: Monday, 19.93%; Tuesday, 18.07%; Wednesday, 17.62%; Thursday, 16.62%; Friday, 18.44%. This accounts for 90.68% of the 30,849 accidents studied. This confirms, but does not explain, the hazardous nature of Monday, followed to a less extent by Friday (Cooke, 1949).

The number of accidents which occurred between 8 a.m. and 5 p.m. on week-days is set out hour by hour for each day of the five days in Table I.

TABLE I.
Hour of Occurrence of 24,591 Accidents between 8.00 a.m. and 5.00 p.m., Monday to Friday.

Hour.	Mon-day.	Tues-day.	Wednes-day.	Thurs-day.	Fri-day.
8.00 a.m. to 9.00 a.m.	866	639	541	547	510
9.00 a.m. to 10.00 a.m.	860	743	713	635	652
10.00 a.m. to 11.00 a.m.	820	759	773	705	678
11.00 a.m. to 1.00 p.m.	623	650	622	573	571
1.00 p.m. to 2.00 p.m.	591	591	556	550	536
2.00 p.m. to 3.00 p.m.	679	681	680	664	828
3.00 p.m. to 4.00 p.m.	606	534	588	553	763
4.00 p.m. to 5.00 p.m.	290	304	303	312	407
Total number of accidents	5335	4901	4786	4524	5045

Sedentary clerical workers do not contribute greatly to the industrial accident problem. This is indicated by a consideration of the premium rates charged per £100 paid out in wages for various occupations. For example, people employing clerical workers and booksellers pay 3s. 6d., chemists 6s. 6d., medical practitioners 7s. 6d., university staff 8s. 6d., hospital staff 10s. 0d., shoe factory workers 10s. 6d., motor garage employees £1 4s., blacksmiths £1 17s. 6d., farm employees £1 18s. 6d., carpenters and bricklayers £2 9s., miners £4 13s. 6d., wharf labourers £4 19s. and quarrymen £7 12s. 6d., while for bush felling with blasting the rate is £11 17s. (Queensland Government Printer, 1948). People of varying occupations work at varying times during the day, but in general terms it can be said that members of the groups most likely to have accidents (manual workers) are at work by 8.00 a.m., have lunch somewhere between 11 a.m. and 1 p.m. and commence going home after 4 p.m. On the other hand, clerical employees are nearly all at work by 9 a.m., have lunch between 12 noon and 2 p.m. and cease work after 5 p.m. If the influence of tea breaks held at various unpredictable times is ignored, during four hours only (9 a.m. to 11 a.m. and 2 p.m. to 4 p.m.) can it be assumed that practically all the employee force is on the job. However, the great majority of the most accident-susceptible—the manual workers—would be potential victims between 8 a.m. and 11 a.m. and between 1 p.m. and 4 p.m. As a result of these considerations the probable lunch hours for this group (11 a.m. to 1 p.m.) have been combined into one statistic in Table I.

From a consideration of Table I several points emerge. (i) Accidents are well distributed over all periods of the working day. (ii) The excess of accidents on Mondays

and Fridays, as pointed out previously, is now shown to be due to a peak occurring on Monday morning and on Friday afternoon, whereas Monday afternoon and Friday morning do not show an increase. It is rather hard to incriminate fatigue as the cause of the trouble on Friday afternoon because Friday morning, although the last morning of the week, is comparatively safe. (iii) If one compares the hour between 8 a.m. and 9 a.m., with that between 9 a.m. and 10 a.m. on all mornings of the week it will be noted that the first hour has fewer accidents than the second hour on every morning except Monday. The hour from 8 a.m. to 9 a.m. on Monday morning is quite anomalous since the accidents occurring then are as numerous as those occurring between 9 a.m. and 10 a.m. on the same morning. The Monday morning excess could perhaps be attributed to a falling-off in skill or muscular coordination over the week-end. However, if this were so one would expect that the hour from 10 a.m. to 11 a.m. every morning would be more accident-free than the earlier hours of the morning, whereas this is not the case, except on Mondays. Cynics in industry would aver that the excess early on Monday morning is due to a transplantation of non-work week-end injuries on to the compensation list, but even if this does occur it is only a drop in the ocean of the general compensation picture, for it would account for, at the most, 200 accidents out of the total of 24,591 occurring between 8 a.m. and 5 p.m. on the five week-days. It is probably more reasonable to assume that the excess on Monday mornings and Friday afternoons is due to an unknown factor, which perhaps could be correlated with some psychic factor or disturbance of work rhythm. The differences between the hours from 9 a.m. to 10 a.m. and from 10 a.m. to 11 a.m. on week-days are not significant, and there is no evidence that accidents increased in number as the afternoons wore on. In fact, all the evidence is to the contrary. It is therefore difficult to believe that fatigue plays any part in increasing accident frequency. These conclusions must be rather tentative, since the number at risk at any one time cannot be precisely known.

The Type of Injury.

In Table II the common types of injury are set out according to their frequency of occurrence. The results are not dramatic. Contusions, sprains and strains account for 49.8% of the total. Lacerations account for a further 21.6% and penetration by foreign bodies and flying material for 11.6%. The total proportion of these common injuries is 83%.

However, a more accurate estimate of relative importance can be obtained when another section of Table II is studied. This shows the proportion of the total disability caused by all accidents which is brought about by each type of injury respectively. The main change is that fractures and dislocations, occupying fifth place in order of frequency, move to second place as causes of disability. However, sprains, strains and contusions still account for 44.6% of the total amount of disability, and with lacerations and foreign bodies, for 64.6% of the total.

The overall picture of some practical importance which can be inferred from these data concerning type of injury is that a large portion of industrial accidents can be adequately and safely handled, either in general practice or in industrial medical practice. There is no need to send such patients automatically to the already over-crowded casualty departments of public hospitals. There are, of course, common-sense provisos to this. The practitioner must know his own limitations and those of his equipment. Access to means of proper radiological examination is often necessary, and he must keep always in mind that the end objective is a good functional result—judged physiologically and psychologically as well as anatomically. The disastrous social consequences that are sometimes the result of relatively simple injuries—particularly in the middle-aged—must always be remembered. Clinical material presenting at casualty departments should be used efficiently for teaching students and resident medical officers; teachers of a high calibre should be assigned to this duty.

While the medical reader would not be surprised to note the lengthy disability caused by fractures and dislocations, the role played by sprains and strains in disability may be somewhat unexpected. This is due not only to the large number of sprained backs, for it can be seen in Table IV that a sprain in almost any part of the body takes longer to clear up than other types of injury apart from fractures. The comparative mildness of the average industrial burn and scald is also remarkable.

The Part of the Body Affected.

Table III shows the relative frequency with which various parts of the body are affected. In some categories there was a difference between the percentages shown in Sample A₁ and Sample B₁. These did not appear to be

TABLE II.
Type of Injury.

Type of Injury.	Number of Accidents.	Percentage of Total Frequency.	Number of Days of Disability.	Percentage of Total Number of Days of Disability.	Average Number of Days of Disability.
Strains and sprains	7871	25.5	172,476	28.7 (1) ¹	21.9
Contusions	7490	24.3	96,280	15.9 (3)	12.9
Lacerations	6680	21.6	93,652	15.5 (4)	14.0
Penetration by foreign bodies or flying material	3580	11.6	27,086	4.5 (5)	7.6
Fractures and dislocations	2985	9.7	144,569	23.9 (2)	48.4
Burns, scalds and explosions	1179	3.8	15,820	2.7 (7)	13.4
" Hernias "	462	1.5	33,084	5.5 (6)	71.6
" Slipped discs "	208	0.7	9026	1.5 (8)	43.4
Not stated	159	0.5	3750	0.6 (9)	23.6
Concussion	139	0.5	3254	0.5 (11)	23.4
Crushing	59	0.2	3269	0.5 (10)	55.4
Miscellaneous injuries	37	0.1	1256	0.2 (12)	33.9
Total	80,849	100.0%	603,522	100.0%	19.6

¹ Figures in parentheses indicate rank of importance in respect of disability.

great. However, tests show that these differences were significant. Further analysis revealed that the significance was due to "events of low incidence". Excluding these we can say that the two samples are equivalent. We have therefore combined the samples as elsewhere. From the point of view of prevention the high frequencies for eyes (7.8%), left hand (14.7%), right hand (14.2%), right foot (7.1%) and left foot (7.4%)—a total of 51.3%—are of importance because in many cases protective devices for these parts of the body are feasible. As can be seen from the rest of the table these categories account for 43.3% of the total amount of disability. Safety goggles, gloves and boots appropriate to the occupation are available. However, persuading people to use them is a different matter. Nevertheless, the results when this is achieved are good. In the other large categories—lower limb, not foot (13.9%), back (11.5%), upper limb and shoulder, not hands (8.7%)—the parts are not amenable to the use of protective devices to any great extent.

The part of the body affected varies with different types of industrial pattern. Browne (1946) found, for example, that for every 100 injuries, 70 affected the hands, which is contrary to our findings. Shaw's findings (1958) in American naval dockyards are closer to ours. He reported that 17.5% of the injuries affected the hands and 8.5% the feet. As mentioned previously, every industry and factory must study its own problems before deciding on measures of prevention.

On an average shoulder injuries cause a surprisingly long period of disability, probably because so many of the lesions are sprains. Injury to the right hand results in a slightly longer average period of disability than injury to the left hand, but the significance of this difference could not be checked at this stage in our work. If real it is due in part to the fact that the right hand is sprained

more frequently than the left, but nevertheless contusions, lacerations and penetrating injuries produce slightly longer disability in the right hand than in the left. The difference may be due to the patient's own confidence in his ability to resume his work rather than in any difference in the lesion.

Common Lesions.

In Table IV some information about common lesions resulting from accidents is given. This covers 27,157 (88%) of the total 30,849 accidents analysed. Strained and sprained backs, lacerated and contused hands, foreign bodies in the eyes, sprains, strains and contusions to the

TABLE III.
Part of Body Injured.

Part of Body.	Number of Accidents.	Percentage of Total Number.	Total Number of Days of Disability.	Average Number of Days of Disability.
Left hand and/or wrist	4541	14.7	80,142 (4) ¹	17.6
Right hand and/or wrist	4391	14.2	83,650 (2)	19.1
Lower limb (not foot)	4291	13.9	95,590 (1)	22.3
Back	3538	11.5	81,068 (3)	22.9
Eyes	2414	7.8	13,520 (11)	5.6
Left foot	2274	7.4	43,521 (5)	19.1
Right foot	2196	7.1	40,673 (6)	18.5
Upper limb (not shoulder, wrist or hand)	1814	5.9	34,166 (7)	18.8
Head	1063	3.5	13,471 (12)	12.7
Multiple parts	1059	3.5	23,887 (9)	23.6
Shoulder	861	2.8	21,004 (10)	24.4
Internal organs	561	1.8	33,182 (8)	50.1
Ribs	459	1.5	9089 (13)	21.8
Abdomen	445	1.4	9164 (14)	20.6
Trunk	417	1.3	6081 (15)	14.6
Miscellaneous ²	258	0.8	4844 (17)	18.8
Pelvis	189	0.6	6041 (16)	32.0
	75	0.3	3559 (18)	47.5
Totals	...	100.0	603,522	19.6

¹ Figures in parentheses indicate rank of importance in respect of disability.

² Miscellaneous group comprised cases in which it is not known whether "left" or "right" side was affected.

lower limbs are the most common injuries. It is of some interest that of the 2985 fractures recorded in this series, 1248 affected the hands and wrists and 810 the feet. In all there were 8932 injuries to the hands in a total of 30,849 accidents studied. This fact, coupled to the old adage that "a workman's capital is his hands", makes adequate instruction in the treatment of hand injuries imperative.

For those who like to have their opinions confirmed by statistics it will be noted that the right hand is sprained more frequently than the left, but that the reverse applies to lacerations.

It will no doubt cause some comment among consultants who tend to see "the cases that go bad" that average periods of disability are so short. However, this must be viewed against the background that a great number of compensation claims result in only short periods of disability; for example, in 1956-1957, 64% of persons who lodged claims had a disability of 12 working days or less (State Government Insurance Office, 1957). In the course of studying the commissioner's annual reports we did find some evidence that claims in proportion as low as 1.5% of the total frequency had resulted in something like 20% of the total disability. The clinician will realize that sometimes the difference between a strained back and a "slipped disc" must have been a matter of opinion. However, the statistics here displayed show a considerable difference, for the 3047 strained and sprained backs produced an average of 21.7 days of disability, whereas the 208 patients with disc lesions had 43.4 days away from work. One may ask whether failure to recover quickly influences the ultimate diagnosis in some cases.

TABLE IV.
Common Lesions: Frequency and Average Period of Disability.¹

Part of Body.	Fractures.		Strains and Sprains.		Burns and Scalds.		Lacerations.		Contusions.		Foreign Bodies.	
	Number of Accidents.	Average Days of Disability.	Number of Accidents.	Average Days of Disability.	Number of Accidents.	Average Days of Disability.	Number of Accidents.	Average Days of Disability.	Number of Accidents.	Average Days of Disability.	Number of Accidents.	Average Days of Disability.
Lower limb	177	106.3	1033	29.3	130	15.4	1170	15.2	1522	15.1	225	10.6
Upper limb	149	65.5	384	23.6	124	13.8	449	10.4	592	12.4	103	7.5
Right hand	628	46.1	469	20.8	115	12.2	1599	15.1	1124	12.3	428	11.6
Left hand	620	44.5	344	16.7	125	12.2	1029	14.5	1106	11.8	399	9.8
Left foot	397	42.4	426	17.8	87	24.2	415	14.3	703	12.0	238	10.4
Right foot	413	40.3	433	16.9	91	13.1	349	14.8	671	11.8	229	9.7
Back	28	65.4	3047	21.7					222	14.9		
Shoulder	50	44.9	627	24.4					152	17.4		
Ribs	303	25.9							134	13.6		
Eyes					198	4.1	85	8.9	253	7.8	1852	4.9

¹ Concussion resulted from 131 accidents, accounting for 23.9 days' average disablement. "Slipped discs" resulted from 208 accidents, accounting for 43.4 days' average disablement. "Hernias" resulted from 462 accidents, accounting for 71.6 days' average disablement.

The Agent.

The agent involved in an accident is different from its cause, though in many cases it gives the clue to the latter. The factory in which many falls occur would be well advised to clean up its housekeeping before indulging in the less rewarding, but more impressive, exercise of delving into the psyche of its employees. In this, as in other sections of the work, we have used the categories recommended by the Australian Standards Association (1952). The manner in which the importance judged by frequency in the main approximates to the importance judged by days of disability of accidents associated with the common agents indicates that the average severity of the injuries caused by these does not differ greatly. A few of the numerically less important agents—animals and vehicles, for example—bring about accidents with disproportionately severe consequences. (It must be remembered that deaths have been excluded from this series.) As in other countries (Annotation, 1952b), the high drama of mangling and scalping by machinery is fortunately relatively infrequent (see Table V).

A cursory glance at the more common agents would suggest that persistent and patient application of the simple, well-tried remedies would be of benefit. Good

housekeeping, the enforcement of protective devices and training in the use of hand tools are indicated. We can hardly yet make the claim of large American industry that we have gone as far as we possibly can in making the working environment safe. Unfortunately, in rural industries and on construction jobs it is difficult to make the changing environment safe.

When fatalities and accidents sustained on the way to and from work are removed from consideration, animals loom equally as important as agents of disability as vehicles.

Falls from heights accounted for 4.2% of the total amount of disability, falls from steps for 1.6% and falls from ladders for 1.3%. On the other hand, falls on the level resulted in 16.9% of the total disability. Contrary to popular opinion, weight-lifting caused only 9.4% of the total amount of disability.

Disability.

In Table VI the samples A₁ and B₁ have been dissected to show the average duration of disability with reference to age groups; females are shown separately from males. This very satisfactorily confirms that age in itself is a contributing factor in the severity of accidents—in fact,

TABLE V.
Agents of Injury: Frequency and Disability.

Agent.	Number of Accidents.	Percentage of Total Number of Accidents.	Days of Disability.	Percentage of Total Disability.
Small objects:				
Falling objects (flying materials)	5817	18.9	106,513	17.7
Foreign bodies	1783	5.8	14,038	2.3
Handling:				
Lifting weights	2132	6.9	56,509	9.4
Pushing, shoving or otherwise handling	4881	15.8	85,435	14.1
Slipping, tripping and falling	6808	22.1	144,838	24.0 (1)
Hand tools	3667	11.0	55,325	9.2 (4)
Machinery	2419	7.8	51,033	8.5 (5)
Vehicles, not tractors	947	3.1	28,798	4.8
Tractors	85	0.3	3431	0.5
Animals	783	2.6	32,757	5.4 (6)
Burning substances	644	2.1	9999	1.7 (8)
Unknown and multiple	564	1.8	9780	1.6 (9)
Corrosives	123	0.4	1884	0.3
Explosives	107	0.3	2099	0.3
Electricity	75	0.2	906	0.2
Poisons	12	0.0	177	0.0
Total	30,849	100.0	608,522	100.0

¹ Figures in parentheses give rank of importance in terms of disability.

these statistics would seem to indicate that a man towards the end of his working life would have almost twice as long a period of disability as would a young man, even though they both suffered from the same lesion. This obviously introduces a factor which does not receive much notice in standard textbooks.

In males in our samples the duration of the disability increased in an orderly progression with age until the very upper limits, where the smallness of the numbers involved and complex social factors influenced the findings.

TABLE VI.
Average Days of Disability According to Age.
(The total number of cases was 30,849.)

Age (Years).	Sample A ₁ .		Sample B ₁ .		A ₁ + B ₁	
	Average Days of Disability.		Average Days of Disability.			
	Males.	Females.	Males.	Females.		
Under 20	15.9	13.5	15.2	13.6	3861	
20-24	15.4	14.7	15.7	14.5	4111	
25-29	16.4	17.5	16.6	17.9	4124	
30-34	16.5	17.7	17.0	20.3	4098	
35-39	18.9	20.6	21.0	20.4	3718	
40-44	19.5	23.9	21.9	27.5	3821	
45-49	22.5	29.0	23.8	29.0	2645	
50-54	25.7	33.4	25.4	28.3	1933	
55-59	24.4	15.6	27.1	20.9	1482	
60-64	28.8	45.8	27.8	52.6	985	
65-69	24.9	41.0	30.1	24.3	382	
70-74	33.5	—	30.3	82.5	98	
75-79	27.9	—	19.9	—	22	
80 and over	4.0	—	14.7	—	5	
Not stated	—	—	—	—	71	
Average disability	18.9 days	20.6 days	19.7 days	21 days		
	19 days	19.8 days				
Exclude zeros ¹	20.2 days	Exclude zeros ¹	21.1 days			

¹ In making the above determinations we have divided the total number of accidents into the total days of disability, whereas the State Government Insurance Office excludes those claims without any disability before making calculations. Hence the words "exclude zeros" indicate the difference in periods of average disability when such claims with no disability are excluded.

In females, on the other hand, the progression was not orderly, but the general statement is, nevertheless, true that women of middle age have much greater average periods of disability than do young girls.

Nevertheless, it is usually said that this increase in severity is more than offset by a decrease in frequency (Shock, 1947). The weight of opinion is that frequency is inversely proportional to age (Annotation, 1952a). However, there is at least one report somewhat to the contrary, but the victims recorded were in a special group in which accidents occurred mainly while they were travelling on motor-cycles, and a high proportion of the accidents affected the lower limbs (Genoese and Santini, 1958).

In this survey it is difficult to strike an exact frequency rate in relation to age groups, because the number in each age group, which was covered by workers' compensation insurance during the period from July, 1955, to June, 1957, is not precisely known. However, from the 1954 census report it was possible to obtain the percentage of all male

employees who came within any given age group. If one assumes that accident susceptibility and severity (as measured by length of disability) are both constant for all age groups, one can then compare the percentage of accidents and the percentage of the total time lost in any age group with their expected values under the above hypothesis. When this is done it is found that there are systematic variations from the expected pattern.

Where in an age group there occurred fewer accidents or less disability than expected, a minus sign (-) was recorded and where the reverse held a plus sign (+). The result is more easily understood when seen graphically (see Table VII).

Fortunately the variations from the expected values are not great, being of the order of magnitude of about 10% to 15% of the anticipated values. There is no increasing difference from age group to age group with advancing years. In fact there is a suggestion that the divergence may get less; for example, in the 35 to 44 years age group the deviation is approximately +17% of the expected percentage of disability, in the 50 to 59 years age group the deviation is about +12% and in the 60 to 64 years age group it is about +4%. People up to 35 years of age have more accidents than expected, but the average period of disability per accident is so much below the mean that this group contributes a little less than its share to the total time (in respect of male employees) lost to industry owing to accidents. The reverse applies to people over the age of 45 years. There is an interesting intermediate age group (35 to 44 years) in which both the percentage of accidents and the percentage of disability are somewhat greater than expected. If one looks at Table VI it will be seen that this is the approximate point at which the average number of days of disability per accident per age group ($A_1 + B_1$, males) begins to be greater than this average for all accidents. It is as though at this stage in life the caution of age has not yet been completely gained, although some of the delayed healing power which accompanies advancing years is already present.

The data available to us are not sufficiently specific to allow a really accurate dissection of trends such as these. Such a dissection should be made of all lost time accidents occurring in the census year 1961, when employee age stratification will be exact.

Even if our results are correct industry need not be unduly alarmed, for the slight extra disability suffered by men from 35 years onwards would surely be more than offset by their experience and stability. Men who elect to work after 65 years of age are, of course, a distinct group both medically and socially, and even the few accidents we have recorded for this group (approximately 500)—if sufficiently numerous to be reliable—show this. These men had the expected amount of disability—no more and no less—in spite of their years.

Finally we tried to determine the "lost-time frequency rate" for the State, using the following formula:

$$\text{Lost-time frequency rate} = \frac{\text{Number of lost-time accidents} \times 10^4}{\text{man-hours' exposure}}$$

We assumed that all the employees—431,000 males and females—worked 2000 hours per year. The result was 62.7. This can obviously be an approximation only.

TABLE VII.
Expected in Relation to Actual Frequency of and Disability from Accidents in Different Age Groups.¹

—	Under 20 Years.	20-24 Years.	25-29 Years.	30-34 Years.	35-39 Years.	40-44 Years.	45-49 Years.	50-54 Years.	55-59 Years.	60-64 Years.
Percentage of all accidents in males	+	+	+	+	+	+	—	—	—	—
Percentage of all disability in males	—	—	—	—	—	+	+	+	+	+

¹ + = actual figures higher than expected figures; — = actual figures lower than expected figures.

Deaths.

During 1955-1956, 301 claims in respect of deaths allegedly due to occupation were lodged with the State Government Insurance Office. Fifty-seven of these claims were rejected or lapsed, and on June 30, 1956, 41.05% of the claims were still outstanding. "Fatal" claims in this order of magnitude occur year after year. In 1956-1957 for instance, 270 claims were made; 21 of these lapsed or were rejected and 43% were outstanding on June 30, 1957 (State Government Insurance Office Annual Report, 1957). When we carried out this part of our survey (1959) we were able to obtain records of only 161 claims relating to fatalities which had occurred in 1955-1956 and which were also by that time finalized.

The interesting fact which emerged was that only 78 of these 161 deaths were due to actual accidents in the accepted sense which had occurred at work. A further 60 were deaths due to disease, mainly cardio-vascular in nature, and 23 occurred while the person was travelling to or from work. Also it is safe to assume that of the 1955-1956 claims still outstanding in 1959 the majority were in respect of accidents which had a doubtful causal relationship to work. (A clear-cut accident is finalized relatively quickly, but long delays naturally occur when the connexion between the death and occupation is obscure and a matter of dispute.) Accidental death statistics based on claims lodged for purposes of workers' compensation benefits should therefore be viewed with circumspection.

Of the 78 true work accidents, 15 resulted in people being killed by trees and logs, and a further two people were killed by flying pieces of timber; 12 people were run over by engines and trains (11 of these being employed by the Queensland Government Railways); eight were killed by motor vehicles while at work; eight were killed by falls, mainly from heights; six were killed by machinery, five by horses, five by drowning, three by electrocution, three by fires and explosions, two by infected lacerations and one each by an aeroplane, a grader, a tractor, gas, being locked in a freezer, pentachlorophenol, flying metal, snake-bite and thrombosis following a fall.

Summary.

1. Records of 30,849 compensated non-fatal industrial accidents were analysed. All the accidents had occurred during working hours.

2. Of these accidents, 79.7% happened between 8 a.m. and 5 p.m. on week days (Monday to Friday) and 90.68% in all on these five days. Accidents were well distributed throughout all working hours, but there was an increase in frequency on Monday mornings and Friday afternoons. There was no evidence that fatigue caused an increase.

3. Sprains, strains and contusions constituted 49.8% of the injuries sustained, and caused 44.6% of the total disability. Sprains and strains result in lengthy periods of disability irrespective of the part of the body affected; in this they are second only to fractures. Contusions and lacerations in this respect occupy an intermediate position, and injuries caused by penetration of foreign bodies cause the least disability of the common injuries.

4. There were 8932 injuries to the hands, 4470 to the feet, 4291 to lower limbs, 3538 to the back and 2414 to the eyes.

5. A large portion of this trauma could be handled adequately by general practitioners or industrial medical services without the necessity for a wide coverage of time, provided that certain obvious precautions were observed. Medical students and resident medical officers should be adequately trained in casualty practice, and teachers of high calibre should be assigned to this duty.

6. An analysis of the agents involved, as distinct from the causes, suggests that there is still need for the use of simple, well-tried measures of prevention, such as good housekeeping. Many injuries to eyes, hands and feet are also preventable by the use of practical protective devices. The environment should be made safe before the employee's psyche receives all the blame.

7. (i) The average period of disability per accident increased with age, being almost twice as great at the end as at the beginning of the working life. However, men over the age of 44 years did not tend to have as many accidents as those of this age and below. (ii) Most of the accidents studied caused a short period of disability—approximately three weeks of calendar time, on the average. (iii) This sample was deficient in respect of a small number of claims which involved excessively long periods of disability. (iv) Males, aged 35 years and more, contributed slightly more than their fair share to the over-all problem of disability due to industrial accidents, but this increase did not get progressively larger as age advanced. (v) There was a suggestion that those who elect to work after reaching the age of 65 years belong to a specially selected group, and that the 35 to 44 years age group constitutes a cross-over point (particularly the 40 to 44 years group) between youth and age in respect of accident experience.

8. Among the claimed fatalities for 1955-1956 there was a surprisingly large number due to cardio-vascular disease, which has a debatable connexion with industry. Train accidents and accidents with horses made a substantial contribution to the total, but the timber industry produced the largest number of fatalities.

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CHOLEDOCHOSCOPY. THE EXPLORATION OF THE EXTRAHEPATIC BILIARY SYSTEM UNDER VISUAL CONTROL: PRELIMINARY REPORT.

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POST-OPERATIVE SYMPTOMS are common after operations on the biliary tract and a great deal of attention has been given in the surgical literature to their causation and their prevention. In this paper we are concerned with the most important aspect of this general problem—namely, the overlooked or residual stone in the extrahepatic biliary system. Published figures on the frequency of the overlooked stone vary from 4% to 20% (Glenn, 1952; Block, 1956; Thompson, 1956; Smith *et alii*, 1957; Wildegans, 1960; Hamelmann, 1961).

The obvious way of diminishing the frequency of reexploration is to increase the accuracy of our diagnostic methods before and at operation, since we are satisfied that most so-called recurrences are due to stones overlooked at an earlier laparotomy. The wide variety of instruments and of techniques which has been devised to facilitate this exploration is in itself an indication of the dissatisfaction of surgeons with the methods at present available to them.

Amongst the techniques in common use are simple palpation of the common bile duct both before and after the introduction of a probe, its blind exploration with forceps or with a spoon and the even more blind and unreasonably optimistic syringing of the duct with saline. Each of these methods has its shortcomings, especially in the presence of anatomical variations or of pathological changes in the tissues around the duct, and even when all of these methods have been tried, it is all too easy to overlook a stone or stones often hidden away in a recess so that a probe can be passed all too readily beyond it and on into the duodenum.

It is true that if one is still uncertain of the presence or absence of a stone after inspecting the common bile duct as above, it is easy enough to open the duodenum and to explore the papilla and the distal part of the duct from below. However, this procedure is time-consuming and the morbidity of the operation is considerably increased thereby. By means of the same techniques it is much more difficult to explore the hepatic duct system adequately.

Fundamentally, there are two faults with the standard procedures: (i) attempts to find and remove calculi are carried out blindly; (ii) in spite of the very greatest care, the delicate wall of the duct may be injured—an incident which must increase materially the risk of narrowing of the duct, and perhaps even the development of further stones.

Because of the shortcomings of an exploration that depends on palpation and on probing alone, a variety of more refined techniques has been developed. These are per-operative cholangiography, cholelithophony and choledochoscopy or hepato-choledochoscopy.

Mirizzi (1937) was the first to make use of cholangiography as a diagnostic aid at operation. It has since proved its usefulness and has been widely adopted. By this means it is possible to get a measure of the anatomical arrangements of the biliary ducts and to detect stones in the main parts of the intrahepatic as well as the extrahepatic biliary systems. However, it has its shortcomings, and these relate mainly to technical difficulties in the introduction of the dye-stuff and to the interpretation of the radiograph (Norman, 1951).

The cholelithophony is an electro-acoustic device in the form of a probe which can be introduced into the common bile duct. It is then connected to an apparatus which registers the contrast on the contact of the metal probe with gall-stones or with the adjacent soft tissue (Kirby, 1950).

Choledochoscopy or hepato-choledochoscopy, the best method of all, may now be considered. Direct observation of any phenomenon is always preferable to the use of indirect methods of investigation, and it has for long been obvious that the ability to view a stone in the lumen of the duct might lead to a precision of diagnosis hitherto unrealized.

In 1923 Baker developed the idea of direct visualization of the papilla of Vater and the inside of the common bile duct, and he constructed a small funnel with a mirror mounted at its wider end. With the help of a head lamp he reflected light through this angled mirror into the funnel, which was placed in the open common bile duct. Before the funnel was introduced it was necessary to mobilize the duodenum. However, with this instrument he was unable to look into the intrahepatic system.

Hollenberg *et alii* (1937) used a cystoscope in patients after cholecystostomy in order to visualize residual stones in the gall-bladder. After removal of the drain tube the endoscope was introduced and the whole procedure was carried out as a "bedside" investigation. De Weese *et alii* (1952) used the same method.

McIver (1941) designed a new right-angled endoscope consisting of optical, light and irrigating systems, and this was used to visualize the common bile duct and hepatic duct.

The whole subject was given a new impetus when Wildegans (1953) reported his first results with a new choledochoscope. This consists of two parts—a short horizontal section (60 mm. long) and a longer limb (260 mm. long) leading to the eyepiece. A lens system is built into each component, and the light is deflected through a prism where the two limbs meet at an angle of 60°. The instrument also contains a light carrier and an irrigation system and is oval in section (8 x 4 mm.).¹ Both the

¹The choledochoscope is manufactured by Sass, Wolf and Company, Berlin, West Germany.

illumination and the view through this instrument are excellent.

It is my belief that choledochoscopy should be carried out in every instance when the common bile duct is explored. It is, of course, an elementary condition that the diameter of the duct should allow for passage of the instrument without any risk of damage. After the incision is made in the wall of the common bile duct it is advisable to put some holding stitches in the four corners to facilitate the introduction of the endoscope and to make it correspondingly safer. A sucker should be placed near the incision to suck away the irrigating fluid as it runs back through the common bile duct. The instrument is sterilized in the same way as is the cystoscope.

In the standard instrument the distance between the surgeon's hand used in manipulating the endoscope and his face is uncomfortably short. For this reason we have designed a metal disc, 12 cm. in diameter, which is attached to the instrument immediately under the eyepiece, thus considerably reducing the risk of infection. Gloves are changed before the surgeon proceeds with the remainder of the operation. The hydrostatic pressure of the irrigating fluid can be altered if the dilatation of the duct or the opening of the papilla is not sufficient. After careful investigation of the distal part, the instrument can be withdrawn and inserted upwards into the common hepatic duct, and when one's growing experience allows one to appreciate the anatomy of the duct system it is possible to push the instrument forward into the ostium of the left duct and into the dorso-caudal and ventro-cranial branches of the right hepatic duct. The branches of the duct system become clearly visible and are similar to the more familiar bronchial bifurcations. The ability to visualize the hepatic duct as far as the bifurcations is one of the most important advantages of the method. At cholangiography it is often impossible to display the branchings of the intrahepatic portion of the duct system, because of overlap. Under these circumstances it is easy to overlook a stone. Small stones in the common bile duct, especially if they are situated in a pouch, as seems often to be the case near the lower end, may escape the detection of a probe, finger palpation and even cholangiography, but may still be seen with the help of the choledochoscope. The movements of the papilla can be observed, and after some experience it is possible to pass the instrument through into the duodenum.

If choledochoscopy is carried out after calculi have been removed from the duct, the ability to visualize the common bile duct from the ampulla to its intrahepatic bifurcation greatly decreases the risk of overlooking a calculus. It is highly likely that new information will be accumulated with the aid of this method—as, for example, in the elucidation of diverticulum or cyst formation of the common bile duct, in the evaluation of stenosis and perhaps also in the interpretation of the changes on the mucous membrane that accompany cholangitis. It should also be possible to get some measure of the kind of changes that are induced in the mucous lining of common bile ducts which have been exposed to chronic irritation by stones.

As with all other endoscopic procedures, choledochoscopy requires experience and training. Careful practice and patience are required to become proficient with this investigation. It is an exercise which is just as demanding as other established methods of endoscopy, such as cystoscopy and bronchoscopy.

The instrument has been used on 12 occasions, and Table I demonstrates our experience in its use as compared with the results of per-operative cholangiography, operative findings and post-operative cholangiography.

In one case (Case I) stones were missed despite exploration and choledochoscopy and the patient had to be reexplored. In five cases (Cases IV, VI, VIII, IX and XII) the per-operative cholangiography and the operative and endoscopic findings were identical, and all indicated a clear duct system. In one case (Case VII) the per-operative cholangiogram showed an obstruction of the

common bile duct which was revealed neither by an instrumental exploration nor by endoscopy. In one case (Case III) endoscopy was carried out after removal of a palpable stone in the common bile duct and demonstrated a clear duct. In one case (Case V) after a negative per-operative cholangiogram a stone was seen at endoscopy and removed from the common bile duct. In two cases (Cases V and VIII) choledochoscopy was performed in one direction only owing to anatomical difficulties. It is to be noted that in two cases (Cases II and XI) per-operative cholangiography and exploration failed to reveal stones and these were seen and removed only after choledochoscopy. In one case (Case X) when per-operative cholangiography was not performed the operative manipu-

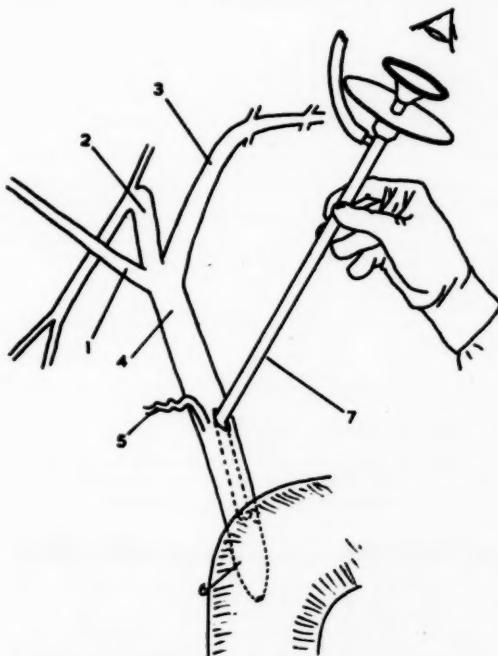


FIGURE I: Introduction of the choledochoscope. 1 = ventro-cranial branch of the right hepatic duct; 2 = dorso-caudal branch of the right hepatic duct; 3 = left main hepatic duct; 4 = common hepatic duct; 5 = cystic duct; 6 = common bile duct; 7 = choledochoscope in position.

lation after removal of stones in the common bile duct did not reveal further calculi. In this case the common bile duct was widely dilated, so it was possible to introduce the index finger. However, a stone was detected without difficulty in a pouch after endoscopy.

Recently a further development has been made in the design of the choledochoscope and it is possible to introduce a pair of small stone forceps beside the instrument when it is already in the common bile duct. This will make it possible for a small stone impacted in the ampulla to be removed under vision. It is also possible to obtain photographic records by the use of a flash bulb.

Conclusions.

1. Choledochoscopy should be used as an adjunct to per-operative cholangiography in all exploration of the common bile duct, when the instrument can be introduced with safety.
2. This procedure carries no risk to the patient and the few extra minutes required in operation time may lessen the chance of a further exploration.
3. The recommended order of investigation is as follows: (i) cholangiography should be performed on the operation

TABLE I.
Summary of Results in 12 Instances of the Use of Choledochoscopy.

Case Number.	First Operation (F) or Re-exploration (RE).	Results of Per-operative Cholangiogram.	Results of Choledochoscopy.		Operation Findings.	Post-operative Cholangiogram.
			Hepatic Duct.	Common Bile Duct.		
I	F	Not performed.	Clearly visible, NAD.	Clearly visible, NAD.	No stone found.	Stones demonstrated.
II	RE	NAD. ¹	Stone in right hepatic duct.	Clearly visible, NAD.	No stone found, but after endoscopy right hepatic stone removed.	NAD.
III	F	Not performed.	Clearly visible, NAD.	Clearly visible, NAD.	Palpable stone in common bile duct removed. Endoscopy performed after removal of stone.	NAD.
IV	F	NAD.	Clearly visible, NAD.	Clearly visible, NAD.	No stone found.	NAD.
V	F	NAD.	Endoscopy impracticable.	Stone seen.	Stone removed.	NAD.
VI	F	Stone in common bile duct.	Clearly visible, NAD.	Stone seen.	Stone removed.	NAD.
VII	F	Obstruction ampulla.	near the	Clearly visible, NAD.	Clearly visible, NAD.	No stone or other abnormality found.
VIII	RE	NAD.	Clearly visible, NAD.	Endoscopy impracticable.	NAD.	NAD.
IX	RE	NAD.	Clearly visible, NAD.	Clearly visible, NAD.	NAD.	NAD.
X	F	Not performed.	Clearly visible, NAD.	Stone in common bile duct.	Dilated common bile duct with stones. A stone was found after endoscopy.	NAD.
XI	RE	Stone in common bile duct.	Stone in left hepatic.	Stone seen.	Common bile duct stone palpable, but hepatic stone removed only after endoscopy.	NAD.
XII	F	NAD.	Clearly visible, NAD.	Clearly visible, NAD.	NAD.	NAD.

¹ NAD = no abnormality detected.

table; (ii) the common bile duct should be opened and endoscopy carried out; (iii) before the common bile duct is closed, choledochoscopy should be repeated.

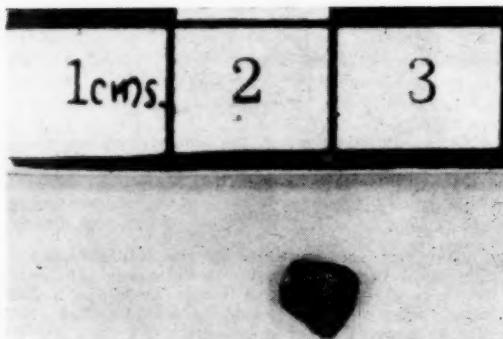


FIGURE II: This stone was overlooked in the left hepatic duct in Case XI during per-operative cholangiography and exploration, and was found and removed only after choledochoscopy.

4. The rigid structure of the instrument presents certain difficulties. It may be difficult to introduce the instrument in a patient with a narrow costal margin, or when previous exploration has resulted in the formation of multiple adhesions.

5. While at present our experience is too small to make a proper evaluation, the instrument has already proved its value in that it has enabled us to detect a stone within the duct system in three cases in which it would otherwise have been overlooked.

This observation, which confirms in some degree the experience of Wildegans (who recently reported (1960) that he detected stones in the hepatic system in 38.5%

of cases of choledocholithiasis), is sufficient to encourage us to use this instrument as a routine whenever the common bile duct is opened.

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REHABILITATION AND THE PRACTICE OF MEDICINE, AND THE COMMONWEALTH REHABILITATION SERVICE.¹

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MAY I say at the outset that these opinions are my own. Nevertheless, they are shared for the most part by my colleagues, and we believe that the need to share them with you is relatively pressing.

British experience confirms this belief; at the joint meeting of the British Medical Association and the Canadian Medical Association in Edinburgh in 1959, Professor Ferguson of Glasgow reported on an investigation into the after-care of the hospital patient, saying that in Britain, effective, organized after-care was as yet only in its infancy and that it badly needed developing if the work of the hospital was not to be speedily undone. We may well speculate on the outcome of commission of inquiry into the prevalence and causation of preventable morbidity, or unnecessarily delayed convalescence, following injury and illness in our own community today.

In regard to this, we should look backwards, briefly, with Professor F. A. E. Crew, who wrote in 1953:

In 1834, Parliament appointed a Commission of Enquiry into the workings of the Poor Law, with the engagement of three medical men to enquire into the prevalence and causation of preventable morbidity in the cities and towns of Great Britain.

Professor Crew regarded this event as one of "quite extraordinary significance", for it initiated, he said, "a system in which recommendations rooted in medical knowledge began to shape social policy and to guide legislative action". This is now no new thing. For instance, such a system operates, through the National Health and Medical Research Council. Again we have seen not a little progress in some of the States in the field of mental health. But in rehabilitation medicine a fertile, if difficult, field remains relatively untouched, apart from

that area covered by the Commonwealth Rehabilitation Service.

We regard the need to share these views with you as pressing for several reasons. One is that some of you, although showing by your presence here your generosity, support and obvious appreciation of our subject, nevertheless regard rehabilitation medicine as something of a *terre incognita*. We regard it merely as a particular type of general practice in which the emphasis is on the overall management of a patient whose disabilities may be unduly great and/or whose various resources may be unduly meagre. Unavoidably, each new or segregated specialty (whether it be a spastic centre or an artificial kidney unit) tends to compound the lack of knowledge of those not specially interested, or not engaged, in its practice.

Another reason is that little can be done at present to impart certain necessary knowledge of rehabilitation medicine to those who need to have it, so that deficiencies in experience cannot readily be made good. Nor can the relevant experience become a routine part of the affairs of current classes of nurses, therapists and medical graduates. This is obviously a matter of great importance, not only for the medical welfare of a varying but significant percentage of the practice of each practising doctor, but also, as a direct consequence, for the reputation of the profession.

We have two main concerns which must be kept separate at all points in this brief discussion: to let you know something of the role of rehabilitation medicine on the one hand, and to say something about the content of the Commonwealth Rehabilitation Service and its relationship to medical practice on the other.

The Commonwealth Rehabilitation Service arose in 1948 from legislation designed to assist tax-supported disabled persons to achieve independence and become wage-earners. It had its origin in an earlier interim scheme, administered by the Commonwealth Department of Social Services, to assist the resettlement into civilian life of ex-service men and women with disabilities not accepted as caused by war service under the *Repatriation Act*. From this interim scheme for disabled ex-service personnel, there developed a rehabilitation service (necessarily medically based), administered by the Department of Social Services under the *Social Services Act*, as a special public service for certain categories of disabled persons in the community, and additional to existing medical, hospital, and related services already existing within each State.

Obviously, to a great degree, this service found itself removed from the main stream of medical practice, and especially from that of the teaching hospitals.

In the 12 post-war years which have elapsed since the inception of the Commonwealth Rehabilitation Service, the population of Australia has risen from seven millions to 10 millions, and at the same time it appears that there has not been a parallel rise in the number of general hospital beds in major hospitals in the metropolis; this is especially so in teaching hospitals (beds for tuberculosis, mental disease, obstetrics and paediatrics being excluded from this argument). As an aggravating factor, the demand on the available general beds has risen unduly for reasons with which you are, of course, all too familiar: a greater survival rate from previously inoperable conditions, a greater incidence of degenerative disease, a relative, if not also an absolute, increase in the number of aged patients and more trauma with greater survival therefrom.

The morbidity from these conditions and from the common major illnesses of the people has created a vast and widespread need for the scientific management of convalescence of not all, but a significant proportion, of these patients.

Those of us who know the situation from our own medical and hospital experience appreciate why so vast a problem has had to take second place, or even to be overlooked, in the preoccupation with the pressing matters of the moment.

¹ Delivered at the Commonwealth Rehabilitation Centre, Hornsby, Sydney, on September 24, 1960, as part of a medical seminar entitled "Medicine, Surgery, General Practice and Rehabilitation in the Commonwealth Rehabilitation Service".

But now, in the beginning of the second post-war decade, the time has come for this major and special problem of convalescence to be faced with the greatest capacity for corporate thought which the profession can offer. Some authorities may need reminding that to disregard or overlook it is to be short-sighted, because, of course, vicious cycles are initiated and perpetuated. Hospital beds in short supply become blocked; needless medical hardship brings aggravating social hardship to this growing pool of patients whose unavoidable discharge from hospitals can now only be described as premature.

Meeting the needs of these patients, whose comprehensive care is the concern of rehabilitation medicine, is a complex matter, but the principles which must underlie the solution of the problems raised are clear to us.

Whatever the outcome, one thing is certain—that is, that only upon the sound basis of the larger teaching hospitals, with their potential ability to attend concurrently and properly to the complementary needs of treating, teaching and research, can effective, organized after-care safely and adequately rest. All those who know what is involved are aware of the fact that each major hospital needs a full-time department of rehabilitation medicine, just as it needs its other full-time departments of pathology, diagnostic radiology, radiotherapy and so on.

Of course, it would be unthinking or ingenuous to look to the Commonwealth Rehabilitation Service to fill the large gaps in medical and hospital practice which the lack of these departments creates. Hospital rehabilitation departments and the Commonwealth Rehabilitation Service (as we already know) can work well together. The two are complementary. The gaps referred to are aggravated by the lack of such community resources as visiting nurses, night helps, active convalescent homes, small suburban hostels for certain of the disabled, sheltered workshops and so on.

Finally, it may be said that society, through its representative governments, must endow the profession and the hospitals with the means to provide rehabilitation medicine, without which comprehensive care cannot be provided.

How this is to be done is not for me to suggest here.

It is merely my wish to emphasize the needs as I see them, and to say that they are pressing. The opinions expressed are personal, and do not necessarily represent those of the Commonwealth Department of Social Services, or of its Rehabilitation Service.

Acknowledgement.

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REHABILITATION AND THE PRACTICE OF MEDICINE: A GENERAL PRACTITIONER'S VIEWPOINT.¹

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I HAVE been asked to contribute to this seminar a few words from the point of view of a general practitioner who has a large suburban practice, and not much time to give to the refinements of higher academic knowledge. It seemed an overwhelming task to me, as such noted men of the profession would undoubtedly be present; and I was

¹ Delivered at the Commonwealth Rehabilitation Centre, Hornsby, Sydney, on September 24, 1960, as part of a medical seminar entitled "Medicine, Surgery, General Practice and Rehabilitation in the Commonwealth Rehabilitation Service".

tempted to pass over the opportunity of putting forward the general practitioner's viewpoint on some aspects of rehabilitation and some aspects of neurosis as he sees them in the average patient who requires rehabilitation.

Rather than discuss all types of patients seeking such help, I will take only one group which concerns the average general practitioner—namely, private insurance company cases. We will consider the patient who has suffered a handicap of such severity as to put him out of the economic race and place him at a disadvantage in securing a satisfactory income for the maintenance, socio-logical welfare, and well-being of himself, his wife and his family. In this respect I have to say that to these patients monetary security is of paramount importance, and the repeated delays in settling court claims are not in their best interests.

Many of these patients are worried over one of the greatest benefits to their class—namely, their hire-purchase commitments (which fortunately are usually covered by a moratorium provision)—and rental targets and the basic costs of the privilege of remaining alive have to be met, and this is a particular worry in the case of a large family.

The exclusion of the fear the patient has of his disability is ever in the province of the practitioner; he must always endeavour to encourage the patient by opening up new horizons, new avenues of work, new ways of life, and certainly new interests. Competition between the patient and other similarly handicapped persons produces great keenness in these patients, and I have seen this even in my own waiting room. I am in the habit of grouping patients with similar problems for review on certain days, and these patients begin to vie with each other in getting better more quickly, which leads me to my third point.

Occupational group therapy, which of course is seen to the best advantage in institutions, but not to any great extent along the lines of the assembly-line group, would certainly meet with great success in my environs if the cooperation of the many large steel and textile factories could be obtained. In fact, I may even be able to inaugurate this in three such places. One company is, I believe, prepared to accede to the request of a patient of mine; this man, an amputee, who was fitted with and coaxed in the use of his full-length lower-limb prosthesis, desires to return to the environment in which his accident took place and enter assembly-line group work, so that he can find again his self-assurance and see for himself that he is still as good as his fellow man, whom he once thought his competitor.

This, then, prompts another vital thought: the managements of large factories must be made to feel that they have some obligation towards these people, and once this idea has been instilled in them, they should be asked to cooperate in the setting up of sheltered group-assembly lines. If this could be done, it would soon become evident that such patients, who are undergoing rehabilitation, are proud people, inasmuch as they are dependable in work and are ever pitting themselves against the able-bodied as a constant reminder to themselves that they can do as well, if not better, than normal people. Therefore, the management would learn that such a patient is a sound investment, and the management is always interested in sound investments. It has been shown, by actual testing and performance, that it is good business to hire the handicapped because the handicapped can meet the standards of good business.

Such employment could be organized easily enough from the rehabilitation centre itself, but the cooperation of private doctors could add further to assembly-line groups, because we know where they can be located; this suggests that a closer liaison is required between the rehabilitation centre and the doctor in the community in which the accidents occur. I am surprised at the ignorance of the average community doctor regarding such a place as Mt. Wilga. I must confess that I have only recently, within the last three years, become aware of it myself, and its

significance to my own community. This suggests to me that the advertising programme of the Commonwealth Rehabilitation Centre is poor and ineffective.

Let us pause a moment or two to consider what is happening overseas. In Oklahoma City in the State of Oklahoma, United States of America, there is in existence an industrial firm called the Goodwill Industries, which is an independent, self-supporting agency, employing and training handicapped men and women exclusively. It makes no appeal for voluntary financial support, nor does it benefit directly from any government aid or appropriation. The number of applicants for jobs at Goodwill Industries far exceeds the opportunities which Goodwill's budget could provide.

Tinker Air Force base, also in Oklahoma City, which is responsible for the maintenance and rebuilding of aeroplanes, motors and so on for the United States Air Force, is an extensive operating concern providing employment for 20,000 civilians, 18% of whom are handicapped.

Serving industry in electronics and America in rehabilitation is the Paraplegics Manufacturing Company Incorporated, so-called P.A.M.C.O., which is located in Franklin Park, Illinois, and which produces electronic equipment for a multitude of purposes, including aircraft assemblies and missile-guidance equipment; electronic devices for the missile-guidance equipment used in the "Jupiter" intermediate range ballistic missile came from this company.

In the United States of America there are many other such industries, and the Americans have gone so far as to award the President's Trophy annually to a person who has surmounted a serious handicap and who has gone on to serve other handicapped persons. This trophy was awarded to the president of the Paraplegics Manufacturing Company Incorporated on May 1, 1960, by President Eisenhower himself. Such then is part of the recent story of the handicapped in the United States of America; it is a story of which Americans can justly be proud and from which we, in turn, could learn a great deal.

The Americans are so acutely conscious of the problem of the handicapped that they have made annually a State-wide weekly observance—"Employ the Physically Handicapped". They have even produced a commemorative four-cents stamp, which carries the caption "Employ the Handicapped", and which depicts a paraplegic working with a drilling machine. This issue was printed last month, on August 28, 1960.

It is often noted that some form of mental illness is encountered in handicapped patients. Often they have feelings of inadequacy after repeated failure experiences, leading to panic and the conviction that they cannot be helped any further; this increases the disruption of those environmental relationships which have meant security and self-esteem to them, and often there is a total loss of the "life role", to which they can return only when their mental health has sufficiently improved. It is at this stage that the community doctor can fail, owing to the fact that he has not recognized the patient's early nebulous hyperchondriacal and psychosomatic complaints, the problems associated with his neurotic maladjustments and the need for him to "live down" the many facets in his illness which have assumed anti-social proportions. This, of course, is not true in most cases, as we have on the whole some very competent practitioners; at the community level, however, these men are often far too busy to be able to spare the appropriate time for such cases, and some are frankly not interested in this branch of medicine, and the patients are passed over to the out-patient clinic or the psychiatric centre, where the doctor leaves them, not reentering the picture until settlement by the insurance company, at long last, has been made. This, of course, is a most convenient and unfortunate escape-door for the community doctor, who should be always at the central focal point and assume the role of managing director of the board, because he is closer to the community level than is any other specialized branch of medicine or surgery; therefore in this direction he should

act in his fullest capacity as the family doctor referring the patient wherever and whenever he, in his wisdom, deems it fit and necessary to fulfil the emotional and physical needs of his patient.

I have noticed repeatedly in my practice the bad effects that delayed court awards have in such cases, and that often these handicapped patients, with their added neurotic burdens, suddenly become respected and useful members of the community once again on the successful conclusion of their court cases. Their attitude before their award is no doubt prompted by financial insecurity, and perhaps a lack of court provision for complete rehabilitation. This would suggest that the court should assess the rehabilitation problem of any particular patient as a cold cash grant, which should be set aside ostensibly, not only for his financial reassurance, but also for the remedial costs of his rehabilitation, and provisions for job or trade training.

It is noted that insurance companies themselves are reluctant to cover handicapped people, stating, as their argument, that the safety prognosis of a man with only one lower limb, for example, is not as good as that of a person who has the full use of two lower limbs. I know of no statistics in existence which prove that the safety prognosis of the handicapped varies materially from those not in this group. It would make an interesting research study.

Obviously opportunities for sheltered employment do exist, and in the consideration of this point there is a tenet which, although obvious, needs emphasizing—namely, that the disabled person must be trained, so that he has a certain skill readily available for sale, and he should be trained to the limits of his physical, mental and social potentialities—naturally, always under medical surveillance. This becomes the fundamental responsibility of the rehabilitation centre, and when ready, these rehabilitated persons can be farmed out to the appropriate industries concerned under the continued guidance of the community doctor. The cost of this, as I have suggested elsewhere, could be covered by a court rehabilitation grant, which could become a standard workers' compensation provision, without insurance companies quibbling about it. For those unable to be trained, owing to physical, mental, intellectual or any other defects, the best possible replacements must be achieved; unfortunately there will still remain a small proportion, despite our best endeavours, who will remain unemployable, and they will include those of our fellow men and women whose personality defects, emotional imbalance and maladjustment, together with physical impairment, are the greatest. Some of these people will eventually elevate themselves to respectability and usefulness, particularly after court awards have been made, but others will persist as burdens to the community doctor, and to themselves, and exist on social service benefits for all time.

There is, unfortunately, a growing practice in the community whereby insurance companies channel patients through their own medical set-up, so that the community doctor does not enter the picture at all, since the patients are literally delivered from the factory to the insurance company doctor, who often practises at the premises of the insurance company itself. I do not intend to comment on this practice, as it is outside the province of this talk.

I would suggest to those best able to make the necessary decisions that a booklet, and no less than a booklet, should be compiled on rehabilitation, discussing its many facets and ramifications, and detailing the various operative centres that are in existence today, especially as they are relevant to the community doctor; I stress that this is necessary. Such a booklet should be sent to all practitioners on the community level. I have touched only briefly on the problem of the private and insurance company patient, but there are many more avenues into which the ramifications of rehabilitation reach and about which all practitioners are not aware.

In conclusion, may I quote David L. Lawrence, the Governor of Pennsylvania, who, in a recent speech made

during 1960, spoke about "man's finest possession". He said:

We believe that dignity of man is his finest possession. Every man, regardless of his infirmity, has a right to that dignity. He has a right to self-respect. He has the right to attempt to support himself and his family. When he is afflicted, he deserves the attention and help of his fellow citizens.

THE ROLE OF THE PSYCHIATRIST IN THE REHABILITATION OF THE PHYSICALLY DISABLED.¹

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PHYSICAL REHABILITATION programmes depend for their success on carefully organized teamwork, as well as expert individual attention from doctors and the various ancillary services.

The teamwork has two separate but interrelated aspects: firstly, the problem of assessment and diagnosis, and secondly, treatment and progressive evaluation (or reevaluation).

The first aspect of assessment and prognosis is the responsibility of the physician, the psychiatrist, the social worker and the psychologist, with the help of information from those conducting the actual treatment, particularly during the trial period. The area of investigation of these specialists should be well structured, to avoid overlapping, as far as possible. Many patients find it very frustrating and irritating to be asked the same sort of questions by many persons, especially when they do not fully understand what it is all about. To mitigate this, considerable trouble should be taken to take the patient into one's confidence, explaining the overall concept of rehabilitation, and that our fact-finding endeavours are not merely for the sake of elaborate records.

The second aspect of the teamwork—treatment and progressive evaluation—is carried out by the physician, the nurse, the physical therapist, the brace-man, the occupational therapist, the speech therapist, the psychotherapist, activities-of-daily-living personnel, recreation personnel and vocational guidance counsellors who are also in touch with employment agencies.

The reports of these persons at the regular staff conferences, together with their own observations and clinical examinations, give the psychiatrist and the psychologist a clear picture of the disabled patient's character, personality and special difficulties, and the bearing these factors have on his rehabilitation. This brings us to the main function of the psychiatrist in the programme.

This function is mainly concerned with the motivation of the patient in all its aspects. One seeks to know whether the patient is cooperative, and if not, why not? Are his goals reasonable? Has he sufficient "drive" to make the most of what he has left, and to benefit from the various aids that can be given him? Are there certain therapists with whom he can work better than with others? Does he require special psychotherapy concurrent with his physical therapy programme, or does he require intensive psychotherapy before this begins in earnest? These are all important questions to be answered. The motivation of the patient will influence the goals set as reasonable by the physician, will govern the time spent in his physical programme and will determine where the emphasis in therapy should be—that is, whether it should be mainly

physical or psychotherapeutic. At the same time it is worth bearing in mind that the physical programme itself, conducted by kindly and interested persons, has a psychotherapeutic effect on those who are ready and willing to accept it, especially when the patient has had a feeling of hopelessness owing to his ignorance of opportunities available and the possibilities that rehabilitation has to offer.

There are many factors which influence motivation in the patient and some of them will now be discussed briefly.

Inquiry about the mental state as it existed before the occurrence of the disability is sometimes of importance. A contributing cause of an accident, for instance, may be found in a depressive state, or in accident-proneness. Then, by alleviating the associated sense of guilt, the disability may improve the mental state. However, should this persist, it may interfere with rehabilitation.

Quite apart from "pre-disability depression" is "post-disability depression", which is natural when there is severe loss of function, loss of formerly enjoyed activities and occupations and dismay about the future. The absence of consciously felt depression is not a good sign, but this should be distinguished from consciously felt but unexpressed depression, which sometimes is encountered in those patients who suffer in silence and try to present a brave face to the world.

With absence of depression is sometimes seen the well-known mental mechanism of denial. In its most exaggerated form it occurs in some cases of brain damage in which the patient flatly contradicts the facts of his obvious disability; but it is more often seen on a neurotic level in the absence of brain damage, when the patient will verbally admit the disability, but shows by his day-dreams, his hopes, his plans and his goals that he is emotionally ignoring the realities of his disability. The resulting disparity between the patient's goals and the more realistic ones of the physician is a difficulty in the way of rehabilitation.

In cases of brain damage, particularly cerebral vascular accidents, common difficulties are apathy, depression, marked emotional instability, perceptual difficulties and aphasia. These patients, owing to neuronal damage, have lost control of their emotional fluctuations, and hence are much more readily flooded by anxiety aroused by their admission to a new institution with new faces, unfamiliar routines and procedures, when often they are deprived of their former capacity to understand. Hence, they sometimes show marked mental disturbance to the point of psychosis; nevertheless a bad prognosis should not be given until many weeks have passed, especially in early cases of stroke, because they often settle down and can master their anxiety with the help of time and continuing healing processes in the brain.

It is not uncommon to see patients who appear at first well motivated and intelligent, and who give good psychometric testing results, leading to a good prognosis which the ensuing programme does not substantiate. These patients have what can be called an unconscious negativism. They are apparently keen to make the most of their opportunities for rehabilitation, but often give a hint of the opposite tendency by protesting their keenness too much and by an ostentatious demonstration of their activity in the programme. They will often make considerable progress at first, but when they reach a plateau and approach the time of discharge, an anxiety is aroused which shows up not as conscious anxiety, but as irritability, grouchiness and general dissatisfaction. These patients usually have very unsatisfactory domestic relations with husband, wife, children, parents or others with whom they live. The rehabilitation institution becomes for them a haven from domestic discord; they realize that the more progress they make the sooner they will be expected to return to what for them is an unhappy life situation, and they unconsciously react to their proposed discharge as to an unfriendly act.

Some of these patients have an unsatisfactory home environment through little or no fault of their own, but

¹ Read at a meeting of the Victorian Branch of the Australian Association of Psychiatrists in Melbourne on November 29, 1960.

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through circumstances that are beyond their control; but many find themselves in such a plight through subtle personality difficulties which have resulted in alienating the sympathies of their relatives and friends. Their personality difficulties, together with the anxieties provoked by their relative helplessness, encourage them to make an aggressive and demanding use of their dependency, which further alienates sympathy, and thus a vicious circle continues, which can usually be broken only by prolonged, intensive psychotherapy.

Previous drug habituation or addiction is not always obvious, but a history of the taking of sedatives every night for months past is suggestive. This can obviously interfere with rehabilitation by reason of a consequent apathy, emotional instability and, in rare cases, a tendency to delusional thinking, to say nothing of its being a definite threat to the patient's adequate adjustment to life outside the institution. Alcoholism is but a special example of this, and a source of faulty prognosis in this latter regard is the fact that on admission to any sort of institution the alcoholic often apparently loses the compulsion to drink. The staff is thus sometimes lulled into a false sense that all is now well in this regard, with the result that much time, enterprise and money is spent in months of treatment, often apparently effective, the results of which evaporate when the patient is discharged and resumes his drinking. Thus in these cases a consideration of the concurrent and subsequent treatment of the alcoholism may well be an important issue.

Insurance claims in accident cases should be settled once and for all as soon as practicable. Nothing is worse for the efforts of the patient himself and those trying to rehabilitate him than an atmosphere of controversy over claims, and doubts about the extent of the patient's future security. Delay in reaching settlement usually increases the patient's secondary gain from his disability and sometimes seriously militates against his making the most of possibilities of improvement or recovery.

Psychosis is seen from time to time amongst patients with physical disabilities. When overt, with delusions and hallucinations, or confusion and disorientation, it does not make for difficulties in diagnosis. But the question arises whether the psychotic condition should be treated in the physical rehabilitation unit, or whether the patient should be transferred to a psychiatric hospital. As far as possible the former should be attempted, especially if the psychotic condition is likely to respond to electroconvulsive therapy or tranquillizers, the reason being that physical rehabilitation measures are often necessary to prevent further deterioration in the physical state, and few psychiatric units are organized to carry out a simultaneous physical rehabilitation programme. Such examples are cases of acute schizophrenia, acute episodes of psychotic depression or melancholia and apparent psychotic states associated with advancing years. Some of the last-mentioned improve remarkably with good nursing care, adequate nutrition and a sympathetic atmosphere, with cultivation of interests and a sense of something to live for.

Sometimes the psychosis can be masked, and hence difficult to detect, as for instance in the case of the patient who has delusions of persecution, but keeps them to himself, or the patient who is psychotically depressed, with profound feelings of personal unworthiness, and does not talk about them. The latter is different from the reactive depression consequent on a severe disability; it usually responds well to electroconvulsive therapy, and if missed, sometimes results in an attempt at suicide, which is a surprise to all because it is so unexpected in the absence of the usual obvious signs of depression.

Mental defect, especially in its minor degrees, is important to detect because of the limitation in intelligence, sense of responsibility and adaptability, all of which are severely strained in the task of a disabled person making an adjustment to a new way of life often totally different from the previous one.

From the above considerations it would seem advantageous to any comprehensive rehabilitation service that

every patient have a thorough psychiatric evaluation at the outset. This is important for the all-round medical assessment and the occupational and social future of the patient. It is also important from the financial point of view, because patients are admitted depending on special funds, insurance company funds and also limited private means, which should be used to best advantage. Hence, accurate prognosis, which is often difficult, becomes essential to make the most efficient use of the time, energy and funds available.

CASE I.—A beautiful, middle-aged, married, childless woman developed classical paranoia which necessitated her commitment to an institution. In an accident she suffered a broken pelvis and two broken legs and was treated in a general hospital, during which time her delusions did not bother her very much. Electroconvulsive and insulin therapy had completely failed to influence her mental state. The treatment of her fractures and subsequent physical rehabilitation took many months, but was successful, and the staff had her full cooperation at all stages. Within a matter of weeks after her discharge from hospital her delusions of persecution again became florid, causing much domestic strife and trouble with neighbours, so that she had once again to be committed to the institution. Her subsequent treatment proved unsuccessful. This was an instance of a severe, chronic psychosis in no way militating against successful physical rehabilitation.

CASE II.—A middle-aged widow suffered two fractures—one in the cervical and the other in the lumbar region of the vertebral column—which left her with some paresis of the lower limbs of definitely organic nature. After many months of rehabilitation training her improvement was spasmodic and subject to many progressions and retrogressions. It was found that she had considerable hysterical overlay which had not been detected. Her neurotic negativism was sabotaging the rehabilitation effort quite unconsciously. It was revealed in such remarks as: "When the physio's think I am not making headway, I know I am, and when they think I am getting on well, I know I am not." Despite her capacity for considerable charm she had, by a certain aggressiveness in her personality, succeeded in alienating the affections of her former friends and close relatives, so that when the time for her discharge came near she felt she had no one upon whom she could rely for help and moral support. She became emotionally disturbed, irritable and querulous. The rehabilitation institution had become for her a home, and she did not fancy living alone in a flat. Months of physiotherapy seemed to be undone in a matter of a week or two. Another feature that interfered with her physical rehabilitation was her narcissism. She preferred moving gracefully down the corridors in a wheelchair to practising walking with the aid of a stick, which for her meant hobbling along in a somewhat undignified manner. This is the kind of case in which psychotherapy should be as intensive as the concomitant physiotherapy.

CASE III.—A youth, aged 18 years, who had suffered an attack of poliomyelitis affecting all limbs and the trunk at the age of nine years, was sent for psychoanalysis for an acute anxiety state occurring in a condition of early schizophrenia. The treatment of his poliomyelitis and his rehabilitation had been intensive and had extended over several years. Although he recognized the great good this had done him from the physical point of view, unconsciously he felt it as a prolonged and distressing assault. This may have played some part in a disturbance of his sexual development from the latency period into adolescence. During this period he found sexual excitement in once again putting on his surgical corsets and limb braces, making up his face, dressing up in women's clothes and performing various masochistic acts.

CASE IV.—A married paraplegic in his thirties had already been well rehabilitated, but was readmitted to hospital on his wife's request because he was neglecting his routine care of himself. He was emotionally disturbed, uncooperative and in a state of psychotic depression. He was put on a regime of tranquillizers and his condition improved considerably, and he was even making good progress in his retraining. To the staff he appeared well mentally, and it was not until a further psychiatric examination was made that it was found that the tranquillizers were but masking his schizophrenia, and that he was in fact planning to get out of hospital as soon as possible in order to murder his doctor at home for some imagined offence committed six years before. It was necessary to transfer him to a

psychiatric hospital where he could have physical therapy in conjunction with necessary psychiatric measures such as electrotherapy.

CASE V.—An unmarried Negro in his late twenties was admitted to hospital with contractures due to arthritis in all four limbs, but mainly in his legs. He looked tired and dreamy and appeared to be of poor intelligence and education, and his "voices" were thought to be part of the primitive superstitious environment from which he came. The physiotherapists made poor progress in the treatment of his contractures. Psychiatric assessment showed his apparent fatigue to be an equivalent of depression in an hallucinated schizophrenic condition. The flexed posture characteristic of the depressive state was materially aggravating his contractures, and militating against exercises designed to produce extension. This was dramatically demonstrated by the quick response to physiotherapy that followed a course of electrotherapy which cleared his depression and hallucinations.

Reports of Cases.

INVESTIGATIONS ON TWO EXAMPLES OF THE "BOMBAY" TYPE O_h BLOOD, POSSIBLY O_h^A OF THE ABO SYSTEM, FOUND IN TWO WOMEN SIBLINGS OF GREEK ORIGIN.

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IN 1952 Bhende *et alii* described an apparently new character of the ABO system, discovered in the blood of three unrelated Asian Indians. The red cells of these men were not agglutinated by anti-A, anti-A₁ or anti-B agglutinins and therefore appeared to be of group O. However, unlike normal adult group O cells they were not agglutinated by anti-O or anti-H antisera. Their respective sera acted on all red cell samples against which they were tested, with the exception of the erythrocytes belonging to the three individuals under investigation. By appropriate absorptions the antibodies present in each serum were identified as anti-A, anti-A₁, anti-B and anti-H.

Simmons and D'Sena (1955) reported a further example of anti-H in a young married woman of blood group O living in Vellore, India. Bhatia, Sanghvi, Bhide and Jhala (1955) found anti-H in two siblings of blood group O in an Indian family in Bombay. Parkin (1956) described an Irish family in which two siblings also possessed the same kind of blood—that is, apparently group O with anti-H antibodies.

As the first three samples of this "new" ABO type were found in Bombay, it is generally referred to as the Bombay phenotype. Apart from the case reported by Simmons and D'Sena (and they were not dealing with freshly collected blood samples) Bombay type people have been found to be Le(a+).

In the first paper dealing with this character Bhende and his co-workers discussed two possible explanations for this serological phenomenon. It was suggested that the three men could be homozygous for a "new" allele at the A₁A₂BO locus, and this was supported when it was found that the parents of one man were cousins. Alternatively, the facts fitted a modification suggested by Morgan and Watkins (1948) of the theory of Hirschfeld and Amzel (1940), wherein a basic blood group character H is changed by mutant genes towards A, B or O and with a final step to complete A₁, B₁ or O₁. The three men of Bombay type were possibly O₁O₁ and this theory would

fit in with the presence of anti-H in each individual's serum.

However, Cappellini *et alii* (1952) predicted, with great perception, that the Bombay type of blood might prove to be due to an inhibitory mechanism involving both red cells and saliva. Cappellini, who had studied the data relative to the three Bombay type bloods, pointed to the possibility of gene interaction of the Lewis and ABH systems, and considered that the same mechanism, under special conditions, might be extended to include red cell antigens. He believed that in the three individuals of Bombay type the antigens O and/or A or B did not manifest themselves on the red cells, although the respective genes were present in the genotype.

Levine *et alii* (1955), in a family study through three generations of a Bombay type inheritance, supplied elegant laboratory evidence in support of Cappellini's hypothesis. In their case they demonstrated gene interaction which resulted in the suppression of the B blood group gene and the secretor gene *Se*. The genes *B* and *Se* were fully expressed when transmitted to offspring heterozygous for the suppressor gene *x*. In their study the propositus, a woman of Bombay type, her husband and two children gave the following results in blood and saliva tests. The mother belonged to blood group O and was a non-secretor of ABH substances (*se*); the father belonged to blood group A₁ and was a non-secretor of ABH substances (*se*); the first child belonged to blood group A₁B and was a non-secretor of ABH substances (*se*); the second child belonged to blood group O and was a secretor of ABH substances (*Se*).

The presence of group B in one child and the ability to secrete H substance in the second appeared to violate the Mendelian laws of inheritance, unless it could be shown that the mother was really a group B secretor who carried a suppressor gene *x* in homozygous (double) form. If this was so no blood group B substance would develop or be demonstrable on her red cells or in her saliva, but she could pass her true blood group and secretion characteristics on to her children, who would inherit only *x* in the heterozygous (single) form. These family studies proved fully the earlier predictions made by Cappellini in 1952. Levine has suggested the serological name O_h for Bombay type blood, indicating a phenotype defined by the lack of A, B or H substance in the red cells, and the presence of anti-H in the serum.

In 1958 Race and Sanger stated that "we do not yet know what effect the inhibitor gene would have on the expression of an A gene". More recently Pettenkofer, Lubold, Lawonn and Niebuhr (1960) described a family in which the suppressor factor concerned either A or O, and the family tree also indicated a possible suppression in the MN system. Overseas correspondents have advised us that two papers on this subject have recently been submitted to press. Levine, Uhrl and White (1961) have investigated the blood of a healthy female, aged 25 years. The study made revealed an incomplete suppression of A as in the case of O_h blood, but differing from the classical O_h type in having a partially suppressed A on the red cells, and the failure to demonstrate a common anti-A in the serum. The term A_h has been suggested to describe this new and unusual type of blood. The authors suggest that if family data indicate that B is suppressed then the term O_h^B is appropriate, or if A is completely suppressed then the phenotypic term O_h^A should be considered. A general nomenclature for Bombay type bloods and their variants has been suggested. Aloysia *et alii* (1961) have investigated two families, in one of which the A₁ factor is completely suppressed and in the other it is probable that A₁ is suppressed. Calculations indicate that there is only one chance in 1024 that the suppressed factor is not A. The terms O_h^{A2} and O_h^{A1} have been used to describe the respective ABO blood types.

The present paper reports investigations on two further cases of Bombay type, or O_h , occurring in sisters, in whom the suppression does not concern blood group B, but relates to group A or group O. Inquiries as to consan-

guinity have revealed no known relationship between the parents, who were born on different Greek islands.

Clinical Record.

The patient, a Greek-born woman, aged 23 years, attended the antenatal clinic of the Queen Victoria Hospital at the third month of her first pregnancy. Her red cells were not agglutinated by numerous commercial anti-A, anti-B or anti-A+B batches of serum. Her serum agglutinated group A₁, A₂, B and O adult and cord blood cells regardless of their classification in other blood group systems. Her red cells were not agglutinated by her own serum. Identical results were obtained when a fresh sample of her blood was examined one month later. At this time more extensive tests were carried out, with the following results.

Laboratory Investigations.

In addition to tests with standard ABO typing sera the red cells were further investigated with sera of very high titre, some with strong immune anti-A and/or anti-B antibodies. They were not agglutinated by any of these sera, nor were they haemolysed when complement was added. Enzyme treatment with papain did not alter the results. The indirect Coombs test gave a negative result when a Coombs reagent of wide spectrum was used, and no complete or incomplete antibodies could be eluted from the patient's cells after contact with these potent sera. The direct Coombs test on the cells gave a negative result.

Her red cells were not agglutinated by anti-H (*Ulex europeus* extract or human serum), anti-A, (*Dolichos biflorus* extract) or the Forssman antibody. When various animal sera, such as those of rat, horse, guinea pig, sheep, rabbit and mouse, were used for testing, the agglutination reactions of the patient's cells did not differ from those of other human red cells, but when samples of fowl sera, which reacted strongly with control red cells, did not agglutinate the patient's cells, a further study was made. This showed that only 4 out of 24 fowl sera reacted with the patient's cells in the same way as they did with other human red cells, while the remaining 20 either did not agglutinate her red cells, or gave only trace reactions.

The blood grouping results for this patient, together with those for members of her family in Melbourne and those living in Greece, are given in Table III.

With regard to the saliva, like all people of Bombay type so far reported, this patient was a secretor of Le^a substance, and a non-secretor of A, B or H substance.

At room temperature (20° to 24° C.) her serum agglutinated A₁ cells to a titre of 16, A₂ and O cells to a titre of 32 and B cells to a titre of 64. All reactions were slightly weaker at 37° C. For the further identification of the antibodies present in her serum, progressive neutralization tests were carried out in which (for the first neutralization) equal parts of her serum were mixed with selected boiled saliva samples diluted 1 in 4 in saline. The results are shown in Table I.

The mixture of serum with O secretor saliva, which still contained some anti-A₁ and fairly strong anti-B agglutinins and which gave a trace reaction with A₂ cells, was again diluted with equal parts of saliva (previously diluted 1 in 4 in saline) from secretors of A, B and H substances, and tested again with A₁, A₂, B and O cells. The results are shown in Table II.

It can be seen that further neutralization with A secretor saliva removed the weak anti-A₁ agglutinin, and reduced only slightly by dilution effect the much stronger agglutination of B cells. Neutralization with B saliva removed the action on B cells, but left weak anti-A₁ behind. The residual anti-B agglutinins left after the A saliva neutralization were demonstrable at 10° C., room temperature and at 37° C., while the weak anti-A₁ agglutinins left after the B saliva neutralization were not demonstrable at 37° C.

Similar results were obtained by absorptions with red cells of group A₁, A₂, B and O, and it appeared likely, but

not certain, that the patient's serum contained only anti-A₁, in addition to an anti-H and anti-B. The action on A₂ cells was assumed to be due to anti-H antibody.

Family Study.

The patient's husband was of group A,B, and a secretor of A and B substances and Le(a-). The patient was subsequently delivered by Cæsarean section of a healthy female child, whose blood group at birth was A, and

TABLE I.
Results of Neutralization of the Patient's Serum by Diluted Saliva from Individuals of Different ABO Blood Groups.

Type of Saliva Mixed with Patient's Serum.	Blood Group of Cells Tested.				
	A ₁ .	A ₂ .	B.	O.	
A Se ¹	..	±	+	+++	++
B Se	..	++	++	++	++
O Se	..	++	±	+++	-
O se ²	..	+++	++	+++	+++
Control serum plus saline	..	+++	+++	+++	+++

Se = secretor.

¹ se = nonsecretor.

strongly Le(a+). She was a secretor of Le^a substance and a secretor of A and H substances despite the Le(a+) result of the test on the blood sample. Tests made six weeks after birth gave identical results on both blood and saliva samples. Further tests will be made to discover whether the present characteristics will be permanent or will change in early life. The cord serum contained some anti-B, but no anti-H or anti-A₁, and the direct Coombs test on the cord cells gave a negative result.

TABLE II.
Results Obtained by the Addition of Further Saliva from Secretors of A, B and H Substances to a Mixture of the Patient's Serum and O Secretor Saliva (as in Table I).
Final Mixture.

Final Mixture.	Blood Groups of Cells Tested.			
	A ₁ .	A ₂ .	B.	O.
Patient's serum + O Se saliva (Table I)	++	±	+++	-
Patient's serum + O Se saliva + O Se saliva	+	-	++	-
Patient's serum + O Se saliva + A Se saliva	-	-	++	-
Patient's serum + O Se saliva + B Se saliva	+	-	-	-
Patient's serum + O Se saliva + saline	..	+	++	-

The patient and her husband had emigrated to Australia from Greece and they had no relatives in this country. However, through the courtesy and cooperation of the Australian and Greek Red Cross Societies, blood samples from the patient's paternal grandfather, father, mother, brother and sister were flown from Greece to Australia.

The sister showed the same serological pattern on her red cells and in her serum as did the patient. All other members of the family were of group A₁, secretors of A substance, non-secretors of Le substance and Le^a negative. Secretor tests were made on serum samples only.

The family blood group results are given in Table III.

The patient's serum did not agglutinate the cells of her Bombay type sister, whose serum was, in turn, inert in contact with her cells.

As the early type of formalized tetanus toxoid (product of Commonwealth Serum Laboratories, Australia) was known to be rich in A and H substances, it was decided to give the patient one injection of 1 ml. of tetanus toxoid. anti-A₁, anti-B and anti-H titrations were performed on

TABLE III.
Blood Groups and Secretor Status of the Patient and Members of her Family in Australia and Greece.

Blood Groups, Secretor Status, Iso-agglutinins.	Paternal Grandfather.	Father.	Mother.	Brother.	Sister.	Patient.	Husband.	Baby Daughter.
Blood groups:								
ABO								
H (reactivity with <i>Ulex europeus</i>)	Ulex	A ₁	A ₁	A ₁	A ₁	O _b ¹	O _b ¹	A ₁ B
Le ^a	—	—	—	—	—	—	—	—
MNS	NSNS R ₁ R ₁	MsNS R ₁ R ₁	NsNs R ₁ R ₁	MsNs R ₁ R ₁	MsNs R ₁ R ₁	MsNs R ₁ R ₁	NsNs R ₁ R ₁	MsNs R ₁ R ₁
Rh	—	—	—	—	—	—	—	—
P ₁	—	+	+	—	+	+	+	+
Fy ^a	—	—	—	—	—	—	—	—
Lu ^a	—	—	—	—	—	—	—	—
Wr ^a	—	—	—	—	—	—	—	—
K	—	—	—	—	—	—	—	—
Jk ^a	—	—	—	—	—	—	—	—
Secretor status:								
ABH	Se	Se	Se	Se	Se	se	se	Se
Le ^a	se	se	se	se	Se	Se	se	Se
Iso-agglutinins	Anti-B	Anti-B	Anti-B	Anti-B	Anti-B	Anti-A ₁ Anti-B Anti-H	Anti-A ₁ Anti-B Anti-H	Anti-B

¹ O_b indicates Bombay type blood.

samples of the patient's serum collected before and two weeks after this injection. There was no rise in titre or alteration of the serological behaviour of the anti-A₁ or anti-B, but the anti-H titre rose perceptibly. The levels of tetanus antitoxin antibodies were found to be the same in both samples.

Discussion.

The blood group picture of the patient and her sister fits into the framework of the Bombay or O_b type. Their red cells were not agglutinated, hemolysed or sensitized by any anti-A, anti-A₁, anti-B or anti-A+B sera with which they were tested, and therefore appeared to be of group O, but unlike normal adult O cells they were also not agglutinated by anti-H of plant (*U. europaeus*) or human origin. Like other Bombay red cells reported earlier they were Le(a+). Both women were non-secretors of A₁, B or H substances, but secreted Le^a substance. Furthermore, their sera contained antibodies acting on all "normal" cells except their own, and those of each sister respectively. Neutralization tests with saliva from a group O secretor removed one part of the antibody mixture, which, from the altered pattern of subsequent cell agglutination, appeared to be anti-H. The presence of anti-H is again typical for blood of the Bombay type. The possible specificities of the remaining antibodies will be discussed later.

Referring to his own case of B suppression and using Ceppellini's (1952) concept and the theory of Morgan and Watkins (1948), Levine (1960) states:

Under normal conditions the basic polysaccharide (b.m.) perhaps under the influence of the *X* gene results in production of H substance if the individual is a secretor. In the presence of *x* in the homozygous state, H is not produced (primary block), and because the substrate is now not competent, conversion to B by *B'*, the gene for antigen B, is blocked and the blood remains as O_b, "Bombay type".

The blood of this patient and that of her sister had all the serological criteria of an O_b or Bombay type, but unfortunately there is no genetic evidence of suppression in the family study. If we assume that all Bombay type bloods are manifestations of a suppressor gene action, the patient's family tree shows clearly that we are not dealing with a suppressor of B, as both parents were of group A. We are left with the possibility that either the gene producing A or the gene producing O is blocked. The A character of the patient's child can be explained from the father's group, as can the secretor status. Basing his work on ABO gene frequencies in the Greek population, Dr. J. J. Graydon, of Melbourne, determined the possibility of the patient's being of group O as 1 in 7, or of group A as 6 in 7.

Although Race and Sanger (1961) do not feel sure that the antibody content of a Bombay serum can be used

as a guide to predict the true ABO status, Levine (1961) considers it possible that the suppressed blood factor may be determined, even in the absence of family data. Serological tests on the serum of the patient and her sister seem to favour their being of group A.

After neutralization or absorption of anti-H, two antibodies remained: a weak anti-A₁ with a limited thermal amplitude (strongest in the cold and inactive at 37°C.) and a much stronger anti-B with the thermal range of a "normal" isoagglutinin. The anti-A₁ could be absorbed by saliva of a group A secretor or by A cells, and the anti-B by saliva of a group B secretor or B cells. There was no evidence of a cross-reaction, and the agglutinin pattern resembled reactions obtained in the sera of some A people with a modified A antigen. Furthermore, the anti-B agglutinin was the only one which was partly placenta-permeable.

It is believed that the serological evidence indicates that the patient and her sister are of group A. It appeared that anti-A₁ (not anti-A) was present in addition to anti-B and anti-H in the patient's serum. Levine (1961) has pointed out to us that, if there is complete suppression of A, the serum should contain a common anti-A, and not an anti-A₁; but according to Dunsford (1960), anti-A₁ is the first step towards full anti-A formation in the child, and it is therefore possible that this could apply to the antibody development of the patient and her sister.

The failure to produce tetanus antitoxin after injection of 1 ml. of tetanus toxoid seemed, from previous work (Jakobowicz *et alii*, 1959), to occur more frequently in persons of blood group A than in those of blood group O.

This tetanus toxoid was also rich in A and H substances, but it appeared that the patient's immune response was only to H substance. The failure to react to potent A stimulation could be more readily explained in a person who genetically possesses A than in one who possesses O.

Summary.

An example of the Bombay type O_b blood of the ABO system has been found in a woman of Greek birth. A family investigation conducted on blood samples flown from Greece to Melbourne revealed that an elder sister also possessed the O_b blood group, and had identical antibodies in her serum. The parents and other family members were of group A₁.

The antibodies demonstrated were anti-A₁, anti-B and anti-H, and from neutralization and absorption experiments made on the serum with A, B and H secretor salivas and blood, it is thought that the ABO antigen suppressed by the homozygous gene *x* is probably A, and the phenotype would then be O_b^A. The immunization with tetanus toxoid rich in A and H substance produced a

response only to the H antigen. The first child of the propositus unfortunately does not provide the answer as to whether it is an example of O or A suppression; in fact, results of blood tests on four generations suggest group A, but do not supply proof.

There was no evidence of consanguinity in the parents of the propositus.

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Reviews.

Handbook of Pediatrics. By H. K. Silver, M.D., C. H. Kempe, M.D., and H. B. Bruyn, M.D.; fourth edition; 1961. Los Altos, California: Lange Medical Publications; Melbourne: Ramsay's Medical Books. 7" x 4", pp. 577. Price: 37s. 3d.

THIS handbook is a useful pocket-sized volume for students and practitioners, as it contains a wealth of information in a concise, clear form about most aspects of clinical and laboratory paediatrics, such as laboratory diagnostic tests, blood analysis, procedures of specimen collection, fluid administration, ranges of measurement for height and weight, bone age, treatment of emergency conditions and drug uses and doses.

The clinical aspects are covered mainly in the form of an enumeration of symptoms and signs, differential diagnoses, prognosis and treatment. Like all handbooks or synopses, this method of presentation cannot give clinical perspective. For example, emotional problems are dealt with in 15 pages, epilepsy is discussed in four pages, while adrenal disorders, which are very uncommon in children, are allocated 10 pages. The student will find it impossible to gain any idea of the relative significance of different illnesses or of how they present in practice. While he may learn what to do for a patient in a medical emergency, he will not learn much about treating patients and advising parents. So long as these deficiencies are appreciated and the book is used mainly as a technical handbook for immediate reference, then it will serve a useful purpose, as it can be readily carried in the student's pocket or practitioner's handbag.

Management of Hypertensive Diseases. By Joseph C. Edwards, A.B., M.D., F.A.C.P., F.A.C.C., with a foreword by Paul Dudley White; 1960. St. Louis: The C. V. Mosby Company. Melbourne: W. Ramsay (Surgical) Ltd. 9 $\frac{1}{2}$ " x 6 $\frac{1}{2}$ ", pp. 440, with many illustrations. Price: £8 5s.

The author states that this book is intended for the guidance of the busy physician in practice, and he has thus undertaken a difficult task. He provides an up-to-date review of the vast literature on hypertensive diseases and includes detailed quotations, but fails to give a critical analysis of the different views quoted. Some inaccuracies were noted in the 1622 references.

It is thought that this book will provide a useful reference text for those with a special interest in this field, but that it is not the ideal guide for the busy practitioner.

Gynaecology for Senior Students of Nursing. By J. Cairney, C.M.G., D.Sc., M.D., F.R.A.C.S.; second edition; 1961. Christchurch: N. M. Peryer Ltd. 8 $\frac{1}{2}$ " x 5 $\frac{1}{2}$ ", pp. 225 with illustrations. Price: 30s. (New Zealand).

The nurse in general training requires a reference book to complement the set lectures given by a tutor. Likewise the sister in charge of gynaecological patients, whether in the ward or out-patient department, should widen her knowledge of this specialty if she is to do her job intelligently. For both types of readers this comparatively small volume is eminently suitable.

The arrangement of the chapters follows an orderly sequence, and, as is usual, a small though adequate number are devoted to obstetrics. The book has been written specially for the nursing profession, and therefore some over-simplification, as well as some omissions, is essential. The principal additions to this the second edition are reference to the use of vaginal and cervical smears in the detection of carcinoma of the cervix and a short chapter on contraception. There has also been added a small section dealing with the psychological aspects of pre-operative and post-operative care; this, although perhaps not important for purely examination purposes, nevertheless contains much common sense and warrants being enlarged and made more comprehensive, because, if the nurse cares to ponder these things, the rapport with her patients will be greatly enhanced and their peace of mind subject to minimal disturbance.

Well supplemented by black and white illustrations drawn by the author, the text is couched in language readily understandable by the student nurse approaching her final examination. However, it is not claimed that the book is a textbook or that it fulfils the requirements of any particular curriculum. This notwithstanding, it should be invaluable to all nurses irrespective of status.

The author's expressed purpose in writing this book has been to help members of the nursing profession, either already qualified or almost so, to a fuller understanding of gynaecology than is usually given in textbooks of surgery for nurses, and we believe that in this he has been singularly successful. The popular reception of the first edition should be more than sustained.

Leukocyte Agglutinins: Properties, Occurrence and Significance. By Sven-Age Killmann, M.D.; 1960. Oxford: Blackwell Scientific Publications. 9 $\frac{1}{2}$ " x 7", pp. 92. Price: 20s. net (English).

THE study of anti-leucocyte factors is still less than ten years old. Already a voluminous literature has accumulated, particularly in Continental publications, and the time is ripe for some stock-taking. This monograph is a comprehensive review of a difficult subject and performs a

useful service in collating and summarizing the relevant literature.

The first chapter discusses published methods for the detection of leucocyte agglutinins in serum and gives a detailed account of the technique used by the author. The description of the laboratory procedure is very lucid, and any experienced laboratory worker should have no difficulty in setting up the method. The following chapters will be of more interest to the general reader, since clinical conditions are listed in which leucocyte agglutinins occur and the significance of their occurrence is appraised. Leucocyte agglutinins may be iso-agglutinins and/or auto-agglutinins, according to whether they react with foreign (homologous) or the patient's own leucocytes. The occurrence of iso-agglutinins signifies that leucocyte groups exist—that is, the white cells of different individuals have differing antigenic components irrespective of the red-cell blood-group systems. The author believes that iso-immunization to leucocyte antigens is not uncommon after repeated blood transfusions and may be responsible for some of the pyrexial reactions experienced by patients who have multiple transfusions.

Agglutinins may be found in the serum of patients suffering from drug-induced agranulocytosis. Their action seems to be dependent on the presence of the drug in the body, and agglutination and destruction of leucocytes in the blood-stream may be important in the production of the rapid neutropenia which occurs in this condition.

It is apparent to all workers on anti-leucocyte factors that laboratory methods of detection are still far from satisfactory, and a considerable amount of work still has to be done in this rapidly developing field. Recent literature suggests that the anti-globulin consumption test will reveal the presence of anti-leucocyte factors when tests for leucocyte agglutinins give negative results. This would be expected if these factors were regarded as being either incomplete or complete antibodies. The author is to be congratulated on the manner in which he has set out the present state of knowledge. The monograph is recommended to those likely to be interested in the subject matter, particularly to haematologists and to blood transfusionists.

Gynaecology for Students. By Lance Townsend, M.D., B.S., F.R.C.S. (Edin.), F.R.A.C.S., F.R.C.O.G., D.T.M. & H. 1961. London and New York: Cambridge University Press. 9 $\frac{1}{2}$ " x 6", pp. 340, with illustrations. Price: 63s.

A logical outcome of the increasing maturity of the older universities in this country is the publication from time to time of authoritative and well-written standard textbooks which have been conceived and produced in our own schools. Such a publication is the present small compact volume, which is a credit both to the author and to his publishers, the Melbourne University Press.

The context, which follows the usual pattern of a textbook written primarily for undergraduates, presents the subject in a systematic (possibly over-systematic) fashion, with numerous headings and subheadings, followed by brief, pithy and relevant observations. This does not make for easy reading; but "getting to grips" with a new subject is not an easy process, and can probably be achieved more effectively by students in this way than by studying a text written in a more discursive style, which may fail to pinpoint the salient features. This book has been written with evident appreciation of the need to use words economically—there is little pausing to elaborate or to qualify, or to appraise alternatives. Consequently the critical reader will detect minor inconsistencies and occasional unacceptable generalizations that would, no doubt, have been less apparent in an expanded but less suitable text. Thus a brief account of premenstrual tension refers to the syndrome as an electrolyte imbalance due to excess of both oestrogen and progesterone (rather than one of the more commonly accepted concepts of hyperoestrogenæmia or abnormal oestrogen sensitivity or disturbed antidiuretic function). An excess of progesterone having thus been cited as contributing to the aetiology of the condition, the next paragraph (dealing with treatment) states that ethisterone, in a dosage of 10 to 15 mg. three times a day for the last week of the cycle, is very effective. However, such inconsistencies are rare and in no way detract from the value of the book as an authoritative work.

There is an excellent chapter on malignant disease of the uterus, written by the late Mr. Graham Godfrey and Dr. A. M. Hill, and Dr. Hans Bettinger has contributed a chapter on the aetiology and pathology of ovarian neoplasms.

As befits a book written primarily for students, there is consistent emphasis on the need for early diagnosis of

genital cancer, and modern cytological techniques are fully described.

The format of this book is most pleasing—it is easy to handle and to read. Of particularly high quality are the clinical photographs and the photomicrographs, which are used liberally and to good effect. The reader is left with the impression that all the salient points in the realm of clinical gynaecology have been brought together in this still "slim volume". So many of the illustrations and excellent photographs appear in print for the first time, and so much that has been topical in gynaecology in recent years has been included, that this publication is excitingly "new". It should serve its purpose admirably as a textbook for students.

The Transplantation of Tissues and Organs. By M. F. A. Woodruff, M.D., M.S. (Melb.), F.R.C.S., F.R.C.S.E., F.R.A.C.S.; 1960. Springfield, Illinois: Charles C. Thomas; Oxford: Blackwell Scientific Publications; Toronto: The Ryerson Press. 10 $\frac{1}{2}$ " x 6 $\frac{1}{2}$ ", pp. 814 with illustrations. Price: £10 4s. (English).

THE publisher informs us on the dust cover that "As a general surgeon and head of a team of distinguished investigators, the author is well qualified to write on the topical and exciting subject of tissue and organ transplantation. He addresses here both biologists and surgeons in the firm belief that future progress depends on their effective collaboration and understanding of mutual problems".

This we find a just claim, and the rest of the advertising "blurb" does no more than justice to what is a remarkably fine volume. Professor Woodruff is a Melbourne graduate now occupying a position of distinction overseas. He has been an international figure in the field of tissue transplantation for some years now, and he tells us that the volume was planned as long ago as 1950. He has, we presume, been working on it continuously ever since, carefully documenting the immense amount which has been published in this rapidly growing subject. The result is a volume of encyclopaedic dimensions for which he is almost entirely responsible. As a measure of the coverage, the bibliography contains more than 4000 references.

The first half of the book deals with tissue transplantation from a purely biological point of view, and this is admirably presented. The material here, as indeed throughout, is ably marshalled, with orderly main headings and subheadings. These help to sustain and strengthen the argument, and should aid materially the curious reader who comes to use the book as a work of reference. This is the field to which the author himself has made such effective contribution, and he writes here with a conviction which is lacking somewhat when he turns, in the second half, to the rather more diffuse consideration of the clinical application of tissue and organ transplantation. The canvas is a big one, but he contrives to fill in the details of the picture. In fact, in places it has some of the character of a mural, where the artist has been eager to find a place for everything without due regard for the preservation of total harmony. We admit, however, that this may not appear to others a valid criticism: many will find it natural and commendable that a place is found for orchidopexy, for reconstruction of the oesophagus, for ureteric transplants, and the like.

Altogether this is a volume of which the author can well be proud. The publishers, too, can allow themselves some self-congratulation, for it is beautifully produced with an easy type and excellent illustrations. We fear that cost will place it out of reach of many who may want to have a copy always on hand, but we must console ourselves that no medical library of any consequence will fail to place an order for it forthwith.

Essentials of Neurology. By J. N. Walton, M.D., M.R.C.P.; 1961. London: Pitman Medical Publishing Company Ltd. 8 $\frac{1}{2}$ " x 5 $\frac{1}{2}$ ", pp. 422. Price 47s. 3d.

DR. J. N. WALTON, who needs no introduction to neurologists the world over, has written this book for practitioners and students, both undergraduate and post-graduate. As a matter of fact, we consider that a practising neurologist could read it and gain much from the succinctly written material.

The textbook has been written by an exceptionally clear-thinking, methodical neurologist, and it brings to the medical public a refreshingly new and dynamic approach without being didactic. Space does not permit the review of the book chapter by chapter. The chapter on investigation of the patient is a compact and concise review of what investigations should be carried out. In the chapter on

speech disorders, apraxia and agnosia, he presents a very readable synopsis of a difficult problem. The description of speech disorders in childhood is a much-needed and practical addition. The inclusion of a chapter on diseases of the mind reflects the dynamic and practical approach of the author. It is a rapid but adequate review of the dementias, the psychoses and the neuroses.

Injuries to the central nervous system, including cranio-cerebral trauma and peripheral nerve injuries, are dealt with well and concisely. An extremely well-constructed review on cerebral and spinal tumours is presented. Once again, the author's dynamic approach is reflected in his appraisal of the present status of conservative versus surgical interference in aneurysmal rupture and haemorrhage. His chapter on vascular disease of the central nervous system is thoroughly up to date, and he gives the current view on the haemodynamics of the carotid and vertebral-basilar system. His discussion of recurrent cerebral ischaemia is timely.

Chapter 20, the final chapter, is headed "Treatment in Neurology". This is an extensive chapter which discusses the relief of pain, the treatment of epilepsy, the management of the paraplegic, the management of the comatose patient and the management of respiratory paralysis, in a general and instructive but well-informed introduction to a more detailed consideration of specific diseases. Finally a brief review on surgery in neurology brings to a close a well-written textbook.

If this book had the format and gloss of an American textbook with more illustrations (the latter are pitifully few), it would rank among one of the foremost textbooks of present-day neurological teaching.

Specifications for Pesticides: Insecticides, Rodenticides, Molluscicides, Herbicides, Auxiliary Chemicals, Spraying and Dusting Apparatus. By the World Health Organization; Second edition; 1961. Geneva: World Health Organization. 9½" x 6", pp. 524 with 31 figures. Price: £2 10s.

THIS publication is the collated work of a number of W.H.O. Expert Committees on Insecticides, and is a revised version of a technical manual originally published in 1956. It has been expanded to cover a number of new products and has a section on herbicides. The contents are concerned with the various pesticides commonly used in the control of human disease and the apparatus used in the field application of these preparations. It is divided into sections corresponding to the subtleties and a section of annexes dealing mainly with test methods common to several specifications. The specifications for each substance or its preparations are drawn up in detail, and include chemical and physical properties, packing and marking and a clear description of recommended analytical procedures. In its present form it is a useful guide to those concerned with the use and assay of pesticides. Two annexes might well have been added—one on toxicology and the other on trade formulations. It is to be hoped that this useful publication will undergo periodic revisions.

Clinical Obstetrics and Gynecology, Volume 3, Number 4: Fetal Physiology and Distress: Endocrinology. Edited by T. L. Montgomery, M.D., and R. B. Greenblatt, M.D.; 1960. New York: Paul B. Hoeber, Inc. 9½" x 6", pp. 335, with illustrations. Price: \$18.00 a year, by subscription.

THE symposium on "Fetal Physiology and Distress" is opened by George W. Anderson, pathologist to the Providence Lying-In Hospital, with some observations on the causes of fetal distress. He discusses pathological changes that can occur, and the problem of evaluation of fetal distress. Further knowledge must come from closer liaison between obstetrician and pathologist.

Edward Hon, with the pen of the true researcher, writes on the diagnosis of foetal distress. His electronically recorded fetal heart-rate patterns, taken from a series of 105 cases of clinically diagnosed fetal distress, go far to explain the significance of foetal bradycardia and tachycardia. With a number of excellent photomicrographs, Snyder, from the Boston Lying-In Hospital, describes the train of events leading to hyaline membrane formation. He points out the inevitable hazards of fetal respiratory movement once the membranes have ruptured.

Haddeus Montgomery, who edits the symposium, writes on certain aspects of the umbilical cord—impaired circulation, infection and management at birth. He advocates late severance of the cord (after the third stage), and deplores the use of "Ergotrate" before delivery of the

placenta, on grounds which appear more theoretical than practical.

Roy Holly discusses foetal and maternal haemopoiesis. He shows how the parasitic foetus protects itself against blood deficiencies despite anaemia of the mother.

Brent reviews recent knowledge of the effect of irradiation on the mammalian foetus, and appends 93 references.

Hampton gives a detailed account of the technique of resuscitation in a chapter on the prophylaxis and treatment of neonatal asphyxia. There are chapters on physiological mechanisms regulating foetal circulation, on the effects of analgesia and anaesthesia on the foetus, and on the recognition and management of the prediabetic mother and her new-born infant.

Greenblatt edits the symposium on endocrinology. With co-authors he reviews the theory and practice of thyroid administration in obstetrics and gynaecology. The latest tests for thyroid function are described, as well as some of the latest thyroid preparations.

Dillon covers the indications and contraindications for the use of the posterior pituitary hormones, oxytocin and vasopressin, with details of the techniques of their administration.

Charles Lloyd, after reviewing animal studies on the anterior pituitary lobe and the hypothalamus, discusses pathological conditions in the human, and the syndromes which result.

The field of oestrogen therapy is covered by Hamblen, who prefers "Premarin" above all other oestrogen preparations.

Hubert de Watteville has been invited to give the case for androgen therapy, but admits that in most conditions in which androgens can be expected to ameliorate symptoms, oestrogens or the newer progestogens can do it better.

The longest and most valuable chapter in the book is Robert Kistner's account of the progestational agents. After a brief introduction to basic steroid chemistry and the effects of progesterone on body symptoms, he gives a summation of the pharmacology and physiology of synthetic progestogens and a most useful discussion of the proved and proposed indications for their use. There is a chapter on corticosteroids, with detailed reference to their use in adrenogenital syndromes.

Zondek describes his research into the relationship of urinary oestriol and gonadotrophin titres with foetal survival.

Dodek discusses hormonal control of lactation. As suckling ensures lactation, he advocates the routine prophylaxis of breast engorgement by an intramuscular injection in the second stage of labour of a preparation comprising a long-acting androgen, a long-acting oestrogen and a short-acting oestrogen.

Peter Bishop brings this excellent symposium to a close by leaving the reader to draw his own conclusions from the presentation of all available evidence for and against the implication that oestrogens predispose to cancer.

Surgery is Destined to the Practice of Medicine: Hunterian Oration Royal College of Surgeons of England. By Sir Reginald Watson-Jones, B.Sc., M.Ch.Orth., F.R.C.S., F.R.A.C.S. (Hon.), F.R.C.S.E. (Hon.), F.A.C.S. (Hon.); 1961. Edinburgh and London: E. & S. Livingstone Ltd. 9½" x 7", pp. 82, with illustrations. Price: 21s. net (English).

THE Hunterian Oration was founded in 1813, and the first oration was given the following year, on Hunter's birthday, February 14, by his brother-in-law, Sir Everard Home. Included in the list of orators are some of the most notable figures in the surgical life of their generation, and the most recent, the 89th in the line, is no exception to this. The contribution made by Sir Reginald Watson-Jones to the proper care of the injured in World War II was sufficient to assure him of a place in history; but his influence on orthopaedic practice has been even wider, and his teaching has reached to every corner of the globe. He is a man of great energy and enthusiasm, and his devotion to the tradition of Hunter and of the Royal College of Surgeons of England is evident in almost every sentence of what is a magnificent oration in the grand style.

In 1929 Lord Moynihan claimed with pride: "I am a physician doomed to the practice of surgery." To this the 1959 Hunterian Orator has added no less aptly: "I am a surgeon destined to the practice of medicine." This is then made the text, and in illustration he draws on his experience

of those troubles, fast disappearing, which have for long engaged and taxed the skill of the orthopaedic surgeon—rickets, poliomyelitis, congenital dislocation of the hip, tuberculosis and osteomyelitis.

The founders of the Oration, among their instructions, directed that "... to be expressive of the merits of Comparative Anatomy, Physiology and Surgery not only of John Hunter but also of such persons as should from time to time be deceased whose labours have contributed to the improvement or extension of Surgical Science". With this in mind, Sir Reginald Watson-Jones pays the warmest of tributes to some of the "greats" of orthopaedic surgery, such as Robert Jones and Hey Groves and Dame Agnes Hunt, and in a different field, to the memorable contribution made by Lord Webb-Johnson to the rebuilding and revitalizing of the College in the years since the war.

It is clear that the 1959 Hunterian Orator had a great sense of the occasion. It is easy enough, as one turns the pages of this volume, which is beautifully produced and illustrated by Livingstone, to experience that direct contact with the great men of the past which is the essential feature of any commemorative oration, and which, we feel sure, must have been effectively established on John Hunter's birthday on February 14, 1959.

Common Diseases of the Ear, Nose and Throat. By Philip Reading, M.S. (Lond.), F.R.C.S. (Eng.); third edition; 1961. London: J. & A. Churchill Ltd. 9" x 5 1/2", pp. 264, with illustrations. Price 24s. net (English).

THIS is the third edition of a book designed for students and newly qualified practitioners. Throughout the book, emphasis is on anatomy, physiology and diagnosis. Little space is given to treatment, particularly operative treatment.

The anatomy of the ear is covered in detail. The acute and chronic infections are described, with their treatment. However, tympanoplasty might better be discussed in this section instead of in the section on deafness. The diagram showing incision for myringotomy carried through the posterior malleal fold into the pars flaccida seems dangerous for student teaching.

In the section on vertigo, students could hope to find more detail on the conduct of caloric tests and their interpretation. There is no mention of vestibular neuritis or of positional nystagmus, even in differential diagnosis.

The chapter on deafness necessarily contains a diversity of conditions. The audiogram is discussed, but the decibel scale is not explained. In the surgery of otosclerosis, a 1961 edition could be expected to mention more than fenestration and stapes mobilization.

The section dealing with nasal conditions covers all common conditions, and there is a relatively large section on the anatomy of meninges and intracranial complications of aural and nasal infections.

Adeno-tonsillectomy would seem to be one operative procedure deserving a more detailed description, if this is to be a reference book for newly-qualified practitioners.

Many sections could be more concise, and could allow more detailed discussion of treatment. The book would then be a better reference for general practitioners. Some opportunities to bring the book up to date seem to have been missed, notably the references to antibiotics (penicillin alone is mentioned) to anaesthetic methods and to stapes surgery.

The book is not likely to find favour with teachers in this country.

Synopsis of Histology. By Henry J. Werner, Ph.D.; 1961. New York, Toronto, London: McGraw-Hill Book Company Inc. 8" x 6", pp. 156. Price not stated.

IT is now accepted that modern histology should be a fascinating and dynamic meeting-place of structure and function; it is therefore disappointing to find that this manual is concerned only with structure.

The author has three purposes: "1. to facilitate recognition of histological sections, 2. to highlight the salient features of cells, tissues and organs, and 3. to serve as a concise source of review in times of 'emergencies'." How far does the book fulfil these intentions? Certainly, the book highlights the salient features of cells, tissues and apparently human organs. The descriptions are based mainly upon haematoxylin and eosin stained sections seen under the light microscope; there are two tables of comparisons

but no illustrations. The information is usually clear and accurate, but there is inadequate emphasis on those features which help in the recognition and differentiation of difficult sections. Thus, from the descriptions of autonomic and spinal ganglia, the student would still be confused if presented with a section of one or other ganglion. Similarly, the essential difference between an intestinal gland and a villus, which can be seen only in cross section, is not described. In certain controversial histological problems, vital evidence from the electron microscope is ignored. For example, the neurilemmal sheath of unmyelinated nerve fibres is stated to be syncytial, and the myofibrils of cardiac muscle are said to penetrate the intercalated discs, a vague statement about a now solved problem. As a source of review in times of "emergencies" the book is no substitute for a microscope and a box of slides, and it is doubtful if many examiners would be satisfied by morphology alone.

It is not surprising that the book is uninteresting to read, since it is in nearly tabular form. It would be easier and more rewarding in terms of understanding histology to learn or revise from a good standard text.

Resuscitation of the Newborn Infant: Principles and Practice. Edited by Harold Abramson, M.D.; 1960. St. Louis: The C. V. Mosby Company. Melbourne: W. Ramsay (Surgical) Ltd. 9 1/2" x 6 1/2", pp. 274, with illustrations. Price: £5 10s.

THIS book covers very adequately the definition of the problem of asoxia, its background and incidence. There is a valuable chapter on the physiology and biochemistry of the newborn. There is some repetition, as is likely when there are many contributors, and the indications for active treatment are based upon the Apgar rating. The examination of the newborn is well covered, although estimation of the neonatal blood pressure is hardly mentioned. This book is a valuable one, with up-to-date references, although it will not completely solve the problems of those faced with the resuscitation of the newborn.

Books Received.

[The mention of a book in this column does not imply that no review will appear in a subsequent issue.]

"A Manual for Nuclear Medicine", by E. R. King and T. G. Mitchell, with a foreword by B. W. Hogan; 1961. Springfield, Illinois: Charles C. Thomas; Oxford: Blackwell Scientific Publications. 9" x 6", pp. 406. Price: £5 8s.

"Bile Pigments in Health and Disease", by C. H. Gray, M.D., D.Sc., F.R.C.P., M.R.C.S., F.R.I.C.; 1961. Springfield, Illinois: Charles C. Thomas; Oxford: Blackwell Scientific Publications. 9" x 6", pp. 102 with figures. Price: 40s.

"A Guide to Dental Therapeutics", by J. C. MacDougal, L.R.C.P., L.R.C.S., H.D.D., L.D.S., and G. S. Nixon, Ph.D., F.D.S., H.D.D., L.D.S.; 1961. London, Sydney, Melbourne: Cassell & Company Ltd. 7 1/2" x 5", pp. 216. Price: 26s. 6d.

"The Chemotherapy of Tropical Diseases", by Sir Philip Manson-Bahr, M.D., F.R.C.P., D.T.M. & H. (Cantab.), and John H. Walters, M.D., F.R.C.P.; 1961. Springfield, Illinois: Charles C. Thomas; Oxford: Blackwell Scientific Publications. 9" x 6", pp. 164. Price: 56s. (English).

"Clinical Audiometry", by Michel Portmann, M.D., and Claudine Portmann, M.D., with a preface by Professor Georges Portmann, translated by Bruce Proctor and Sheila Wever; 1961. Springfield, Illinois: Charles C. Thomas; Oxford: Blackwell Scientific Publications. 9" x 6", pp. 350 with illustrations. Price: 96s.

"The Parathyroids: Proceedings of a Symposium on Advances in Parathyroid Research, held at The Rice Institute, now Rice University, Houston, Texas", edited by R. O. Greep, Ph.D., and R. V. Talmage, Ph.D.; 1961. Springfield, Illinois: Charles C. Thomas; Oxford: Blackwell Scientific Publications. 9 1/2" x 6 1/2", pp. 470 with illustrations. Price: 98s.

"Obstetrical Emergencies", by Denis Cavanagh, M.B., Ch.B. (Glasgow), F.A.C.O.G.; 1961. Springfield, Illinois: Charles C. Thomas; Oxford: Blackwell Scientific Publications. 9" x 6", pp. 380 with illustrations. Price: £5.

"Logan Turner's Diseases of the Nose, Throat and Ear", edited by J. P. Stewart and assisted by R. B. Lumsden; sixth edition; 1961. Bristol: John Wright & Sons Ltd. 8 1/2" x 5 1/2", pp. 524 with illustrations. Price: 52s. 6d. (English).

The Medical Journal of Australia

SATURDAY, NOVEMBER 25, 1961.

WHERE WILL YOU SLEEP AT CONGRESS?

PARKS are a feature of the charming city of Adelaide—beautiful parks in abundance around it and within. Those who enjoy the cool dampness of a grassy sward as their bed, the icy glitter of winter stars above them and what Rupert Brooke might have described as the rough male kiss of the Adelaide *Advertiser* wrapped about them, must find these parks a great comfort. On the other hand, the number of satisfactory hotel beds in Adelaide is limited, and a variety of people seek to occupy them, seemingly preferring them to the arms of Nature.

In May, 1962, a multitude of medical practitioners with wives and children will invade Adelaide. As it will be the occasion of the Inaugural Meeting of the Australian Medical Association as well as the first session of the Australian Medical Congress, everyone who can possibly arrange it is bound to be there. And that is, of course, as it should be. Adelaide expects it. The Congress Executive, supported by a team of helpers, not least amongst whom are the wives, has been planning and organizing for more than a year already. A scientific and social programme of most worthy quality and size is taking shape, and it is clear that this Congress would be memorable even if it was not an historically unique occasion. By all means then let us all be there.

At this point, however, an urgent practical consideration arises. Despite the magnitude and attractiveness of the programme, it is probable that some visitors on all nights and all visitors on some nights will want to sleep. For anyone who will stretch out under the greenwood tree the matter presents no problems, provided that he is drawn to the philosophy of

Here shall he see
No enemy,
But winter and rough weather.

If all the visitors felt the same way about it, that would be fine. What the city authorities might say is not too clear, but no doubt the Congress Executive could fix that. However, delightful as such prospect may be, the realists on the Congress Executive take the extreme view that everyone will want to sleep in a bed. This they are prepared to arrange, and, given a fair chance, hope to do to everyone's satisfaction. Since the most important element in this fair chance is enough time, a closing

date has been set for applications for accommodation. And it is very soon, to wit, December 31, 1961. It is known that most hotels will not maintain block reservations after the end of January, 1962, so the matter must be settled well before that date. If you are a prospective visitor to Adelaide for the Congress, you are implored, unless you seek the company of the melancholy Jaques, to seek the company of your more congenial local Congress Secretary (see page 888) and fill in a Congress application form. You may then reasonably hope to have your accommodation as you like it.

A SOCIETY FOR YOUNG MEDICAL SCIENTISTS.

A GROUP of young graduates engaged in medical research has formed a new society with some unusual features. Known as the Australian Society for Medical Research, it has as its first objective to foster interest in medical research in the broadest possible sense amongst the younger members of the medical and scientific community; emphasis, it should be noted, is placed on the word "younger". The further objectives are to provide an opportunity to meet others in related fields of interest and benefit from their experience, to provide research workers in the medical and allied sciences with a forum to present papers for constructive criticism and discussion, and to encourage recent graduates in medicine and allied disciplines to undertake research and to join in the activities of the Society. Regular membership is strictly limited to people under 40 years of age, and members are automatically retired on their fortieth birthday; applicants for membership must have demonstrated an interest in medical research and be graduates of a recognized university. The first meeting of the Society is to be held in Sydney on December 2, 1961. The President of the Society is Dr. B. G. Firkin, and the Honorary Secretary is Dr. A. Skyring, Royal Prince Alfred Hospital, Camperdown, New South Wales.

This is quite firmly a society for young men and women. Senior membership is provided for and is open to regular members who have reached the age of 40 years and to other persons actively directing or encouraging younger people to undertake research. But the rights of senior members are limited to attending the Society's meetings and receiving the Society's journal; they do not share the regular member's right to submit abstracts of papers to the committee for consideration of their presentation at Society meetings, to nominate for selection as and take part in the election of members of the Society's committee, or to introduce guests so that they may submit papers for the Society's meetings. The age restriction is a new idea in this country for a medical scientific society, but it undoubtedly has merit. The young men responsible for founding the Society are clearly not out to affect any sort of superiority. The aim seems to be simply to create an environment in which the maximum stimulus will be given to younger people to engage in and present worthwhile medical research, to have it subjected to healthy criticism more particularly from their age peers, and to get to know those from other places and other disciplines who are likely to be working in conjunction

with them or in parallel with them through a lifetime ahead.

An interesting feature of the activities of the Australian Society for Medical Research is the publication of a journal to be known as *Medical Research*. From time to time over many years the question has been raised of publishing in Australia a journal to cover the field between, on the one hand, the basic medical and biological sciences catered for by *The Australian Journal of Experimental Biology and Medical Science* and, on the other hand, the clinical research which finds a place in *THE MEDICAL JOURNAL OF AUSTRALIA* and *Australasian Annals of Medicine*. The consensus of opinion seems to have been that the time was not yet ripe for such a journal to be published regularly in Australia. *Medical Research* is a cautious step towards filling the gap. We say "cautious" because the Society's plans for their journal are not over-ambitious. It is to be published only once a year, for the present at least, and will contain only abstracts—abstracts, that is to say, of papers prepared by members of the Society and therefore essentially original. This would seem to provide an adequate medium for young medical research workers to make known what they are doing, while it avoids the difficulty that might be experienced in finding enough first-class formal papers to maintain the publication of a conventional type of journal at more frequent intervals. This all indicates commendable wisdom on the part of those responsible for the new Society and its journal. Our only reservation would be to question the appropriateness of the grand title *Medical Research* for such a modest local journal. However, that is the decision of the founders of the Society, and no doubt they have their reasons. We wish them well as they seek to extend the membership and interest of the Society throughout Australia and congratulate them on a bold move which could have a very healthy influence on medical science in Australia at a vital time in its development.

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.

WHEN the Australian Medical Association comes into being on January 1, 1962, the Branches of the British Medical Association in Australia will cease to exist as organized units. However, members of the British Medical Association in Australia may retain their membership of that Association, as well as being members of the Australian Medical Association, if they so elect. A letter offering this is at present in the post from London to all members of the British Medical Association in Australia. Continued membership of the British Medical Association, in accordance with this offer, ensures weekly receipt of the *British Medical Journal* and all other privileges of membership. The rate of subscription is that for overseas members—£A3 19s. 6d. (£3 3s. sterling). This is precisely the same amount as the concessional subscription rate to the *British Medical Journal* available to members of an association affiliated with the British Medical Association, as the Australian Medical Association

will be. In other words, if members of the Australian Medical Association wish to receive the *British Medical Journal* in future, they may do so to the greatest advantage with the maximum financial benefit by continuing their membership of the British Medical Association.

The procedure for continuing membership of the British Medical Association is to notify one's State Branch accordingly. By special arrangement subscriptions to the British Medical Association may in the future be paid to a Branch of the Australian Medical Association along with the Australian Medical Association subscription.

One important practical point emerges. If the appropriate number of copies of the *British Medical Journal* are to be printed for the first issue of 1962, notification of the number of members in Australia electing to continue their membership will need to reach London before the end of the year. The Christmas-New Year holidays add to the difficulties. We therefore urge members who wish to accept the British Medical Association's offer, and in particular to continue to receive their *British Medical Journal*, to advise their State Branches accordingly without delay. The matter is urgent.

Comments and Abstracts.

GAMMA GLOBULIN IN THE CONTROL OF INFECTIOUS HEPATITIS.

ONE of the first reports of the use of gamma globulin for the prevention and attenuation of infectious hepatitis was a preliminary note by J. Stokes and J. R. Neefe published in January, 1945. In this, the authors described the results of giving injections of gamma globulin during an epidemic of infectious hepatitis in a summer camp for boys and girls. Stokes and Neefe found the results sufficiently encouraging to recommend further trials. Since then a considerable literature has accumulated on the subject, but this is by no means exhausted, as witnessed by the continuing appearance of further papers. An important recent contribution to the subject is a paper by S. Krugman and his associates¹ in which the authors describe how advantage was taken of the situation in a large institution for mentally defective children, where infectious hepatitis has been endemic for at least seven years, to study the protective effect of gamma globulin injections and the incidence of inapparent infection. The population of Willowbrook State School numbered over 4000 inmates, and the epidemic proved difficult to control for three reasons: (i) the opportunities for wide dissemination of the virus in a closed institution in which there was intimate contact between patients; (ii) the presence of many patients with inapparent hepatitis; (iii) the necessity of admitting new patients at a fairly constant rate, thus providing a continuous supply of susceptible individuals. Four trials of gamma globulin were carried out over a period of three years, each one planned in the light of the preceding trials. In the event Krugman and his colleagues gathered quite a lot of useful information.

A fundamental question is obviously that of dosage. In trials previously described by other workers, the dose of gamma globulin had ranged from 0.15 ml. per pound body weight in Stokes and Neefe's original trial to 0.01 ml. per pound, and good protection had been claimed from even the smallest dose. Krugman and his colleagues therefore used this dose (0.01 ml. per pound) in their first trial, but the results obtained were not very impres-

¹ J. Amer. med. Ass., 1945, 127: 144 (January 20).
² J. Amer. med. Ass., 1960, 174: 823 (October 15).

sive. The attack rate of hepatitis with jaundice among inoculated patients (mainly children) was about a third of that in the uninoculated group, but among the attendants (all adults) there was no evidence that this dosage had conferred any protection. In the subsequent trials a dose of 0.06 ml. per pound was used, and with this dosage in the second trial the incidence of overt hepatitis among inoculated children was only one-tenth of that in the uninoculated group. Krugman *et alii* conclude that the optimum dose of gamma globulin is 0.06 ml. per pound of body weight, but they note that even this dosage may not prevent anicteric hepatitis.

Another important point is the length of time for which protection is conferred. In the second trial it was found that protection appeared to last for about 12 months. This prolonged period of protection had also been noted by earlier workers, and in 1951 Stokes and his colleagues⁸ put forward the concept of active immunity superimposed on passive immunity (so-called "passive-active immunity") to account for it. This concept postulates that where the inoculated group is continuously exposed to infection, subclinical infections acquired on a waning passive immunity confer an active immunity without the occurrence of any apparent disease. Krugman and his associates accept this concept, and point out that if the effect of the gamma globulin was merely to confer protection for a limited period, after protection had lapsed one would expect a higher rate of infection in the inoculated group than among the uninoculated patients, who had demonstrably been acquiring active immunity while the others were protected. This was not so; in the second year after inoculation the attack rate was approximately the same in both groups: on this hypothesis, infections occurring in the second year would either be in individuals who had somehow escaped exposure to infection during the first year, or be second attacks of the disease. At this point two facts should be mentioned. First, the half life of circulating gamma globulin is stated to be about four weeks. At this rate, if we assume that injected gamma globulin is destroyed at a constant rate, the amount remaining six months after a dose of 0.06 ml. per pound would be equivalent to about 0.001 ml. per pound. Second, at Willowbank it was found that about 60% of cases of infectious hepatitis occurred within the first year of admission to the institution, about 15% occurred during the second year and 25% in subsequent years.

On the question of second attacks, it was found that these occurred in about 4% of the 525 cases of hepatitis with jaundice recorded since 1953: the intervals between first and second attacks ranged from six weeks to 21 months. In a smaller group of 85 patients studied intensively from the time of exposure (i.e., the time of admission to the institution), of whom 50 developed hepatitis with jaundice and 35 had anicteric hepatitis, seven developed second attacks. Krugman *et alii* point out that second attacks must be considered in any evaluation of the effect of gamma globulin, and suggest four possible explanations of the phenomenon. These are: (i) there may be multiple immunologically distinct types of infective hepatitis virus; (ii) the virus may become latent in the liver cells or elsewhere, and be subsequently reactivated by hypothetical excitants, as in the case of herpes simplex; (iii) the infection may shoulder on, without overt signs of disease, until some precipitating factor such as alcoholic excess or an intercurrent infection may cause an exacerbation; (iv) the second attack may be caused by a massive dose of virus, overwhelming the immune state of the individual. However, they emphasize that this is only speculation, and that many of the problems associated with infectious hepatitis will be solved only when a way has been found to cultivate the causative virus.

Finally, interesting information was obtained on the incidence of inapparent infections. In the fourth trial, a small group of patients, some inoculated with gamma globulin and others uninoculated, were closely followed by appropriate liver function tests and careful clinical observation. It was found that nine out of 15 unprotected

patients acquired hepatitis within six months of their admission to the institution, though only one was fully jaundiced. Klugman and his colleagues conclude that about 60% of inmates admitted to Willowbrook develop infective hepatitis within six months, though only about one in 12 develops frank jaundice.

Some of the work done at Willowbrook by Krugman and his associates has been the subject of earlier papers, but the present one presents a comprehensive summary of the trials carried out up to the end of 1959; together they make up a very careful and thorough study of the epidemiology and prophylaxis of infectious hepatitis in a closed community.

THE JAMES IV ASSOCIATION OF SURGEONS INCORPORATED.

THE recent announcement that a Sydney surgeon, Dr. Kenneth W. Starr, has been elected a member of the James IV Association of Surgeons has aroused interest in this body, about which very little has up till now been known in Australia. The following information has been supplied recently to us. During the Congress of the American College of Surgeons in 1957 a small group decided to form an International Association of Surgeons. It would be limited in number, and would be composed of surgeons of exceptional professional skill, who had contributed to research, and whose character would meet the highest requirements of international acceptance. Inasmuch as the guiding spirits in the formation of this organization were Scottish, and since King James IV granted the Charter to the Royal College of Surgeons in Edinburgh in 1505, it was decided to call this organization the James IV Association of Surgeons. The aims of the Association are: to serve humanity, to advance the art and science of surgery, to share individual knowledge and experience, and to encourage research. In order to implement these aims, it is considered that outstanding surgeons should be encouraged to travel and lecture to their colleagues in other countries. The James IV Association has expressed its readiness to defray part of the expenses of such travelling surgeons from funds contributed by its members, lay contributors or foundations. Membership of the Association is by election, which must be unanimous, and it is limited to 50 members. The present members, with a few exceptions, are drawn from the American, English, Edinburgh and Irish Colleges of Surgeons.

SHORTER ABSTRACTS.

PHYSIOLOGY.

PLACENTAL TRANSFER OF I^{131} -INSULIN IN THE RHESUS MONKEY. J. B. Josimovich and E. Knobil, *Amer. J. Physiol.*, 1961, 200: 471.

USING rhesus monkeys, the authors have studied the fate of I^{131} insulin in the maternal and fetal circulation. They found that, injected into the maternal circulation, I^{131} insulin appeared in the fetal circulation within five minutes, the placenta permitting its passage but affording a high resistance to diffusion. The difference in concentration in umbilical artery and vein indicated that it was more rapidly degraded in the fetal than in the maternal system. The experiments were done with doses of insulin which caused no change in blood-glucose levels; the authors emphasize this, as it was a source of confusion in earlier work, based on the study of maternal and foetal blood-glucose levels.

EVIDENCE FOR SECRETION OF AN ALDOSTERONE-STIMULATING HORMONE BY THE KIDNEY. J. O. Davis *et alii*, *J. clin. Invest.*, 1961, 40: 684 (April).

USING haemorrhage as the stimulus for increased aldosterone production in dogs, the authors of this paper have shown that the response still occurs in the absence of (i) the hypophysis, (ii) the whole head, (iii) the liver. Removal

of both kidneys, however, abolishes the response, and they therefore conclude that the stimulus to increased secretion is mediated by a circulating agent (as yet of undefined nature, but possibly related to the renin-angiotensin system) released by the kidney. Saline extracts of kidney substance when injected also cause an increased output of aldosterone; saline extract of liver is inactive. They speculate that changes in circulating blood volume or vena caval pressure, which are commonly associated with alterations in aldosterone output, act by their influence on some specific region of the kidney.

EFFECT OF CHLORPROMAZINE ON BLOOD LEVEL OF ALCOHOL IN RABBITS. D. L. Lipton *et alii*, *Amer. J. Physiol.*, 1961, 200: 1007.

PROCEEDING from a recent observation that chlorpromazine in man causes the blood-alcohol level to rise higher than expected for a given amount ingested, the authors have used rabbits in a detailed analysis of the mechanisms responsible for this. They were able to exclude any influence of chlorpromazine on the absorption of alcohol, and concluded that the high level was due to an inhibition of the metabolic processes by which it is normally consumed. They also observed that the degree of intoxication was greater than that normally associated with a given blood alcohol level. The conclusion is that even moderate drinking is dangerous when the subject is taking tranquillizers.

THE EFFECTS OF THERAPY ON PULMONARY MECHANICS IN HUMAN PULMONARY OEDEMA. J. T. Sharp *et alii*, *J. clin. Invest.*, 1961, 40: 665 (April).

In a trial of different measures for the relief of pulmonary oedema (positive-pressure breathing, intravenous injection of aminophylline and morphine), the authors found that positive-pressure breathing increased pulmonary compliance while it was being carried out, but had no permanent effect. Intravenous injection of aminophylline led to an acute fall in pulmonary airway resistance and to a rise in lung compliance. Morphine had no detectable effect upon the mechanical properties of the lungs; its usefulness in the treatment of this state, which the authors fully support, is therefore still mysterious.

OSMOTIC PRESSURE EFFECT OF THE RED BLOOD CELLS—POSSIBLE PHYSIOLOGICAL SIGNIFICANCE. A. T. Hansen, *Nature*, 1961, 190: 504.

It has long been known that as a consequence of the changes in ionic concentrations within the red cell as the haemoglobin passes from the oxygenated to the reduced state, the red cell, acting as an osmometer, increases in volume by about 1%. If one calculates the amount of water thus involved, it comes to the total of 36 litres per day. The author draws attention to the fact that in capillaries the red cells are generally distorted and squeezed so that the greater part of their surface is in contact with the capillary wall, and proposes that this may mean that the water involved in the osmotic change may come directly from the tissue spaces rather than from within the capillary. Such a mechanism, if it exists, could very usefully be invoked in those cases in which the balance between plasma colloid osmotic pressure and capillary hydrostatic pressure is such that oedema should, but does not, develop.

PHYSICAL MEDICINE AND REHABILITATION.

POSTOPERATIVE CARE IN LUMBAR DISC SYNDROME. T. P. Anderson *et alii*, *Arch. phys. Med.*, 1961, 42: 152-158 (March).

BECAUSE there is little information in the literature concerning post-operative care in lumbar disc syndrome, the authors have reviewed 179 cases from this point of view; they admit that the follow-up period was short in some. Of the 179 patients, 94% appeared to have good results; only 3% required fusion later. The results compare favourably with other series reviewed, and the authors attribute this to the following factors: (i) Careful pre-operative evaluation. (ii) Close cooperation between neurosurgeon and psychiatrist during the early post-operative period. (iii) Individually prescribed treatment, consisting of the following: (a) exercises for strengthening weak muscles in the lower extremities as well as in the trunk,

and for correcting contractures; (b) posture correction, including weight reduction; (c) limitation of activities; (d) treatment of associated disorders; (e) correction of gait with crutches, cane, brace or heel lift.

RECOGNITION AND CARE OF EARLY SCOLIOSIS. R. L. Bennett, *Arch. phys. Med.*, 1961, 42: 211-225 (April).

The author discusses paralytic and idiopathic scoliosis. He states that scoliosis is the most difficult musculo-skeletal deformity to deal with in the patient who has not reached mature skeletal growth. Unless persistent deviations of the spine are recognized early, and treated intelligently and persistently throughout all the growing years, it will be impossible to control the alignment of the spine and prevent structural changes. There are no "short cuts" to the care of this deformity. The author divides treatment into four components: (i) regional mobilization; (ii) muscle reeducation; (iii) support of the spine; (iv) limitation of activity.

MECHANICAL PROPERTIES AND TEMPERATURE OF INTACT SKELETAL MUSCLE IN PATIENTS WITH MUSCULAR DYSTROPHY. S. Y. Botelho *et alii*, *Arch. phys. Med.*, 1961, 42: 226-232 (April).

The authors present an analysis of the simultaneously recorded electrical activity and mechanical activity of the thenar adductors, which resulted from stimulation of the ulnar nerve. They show that pronounced abnormalities in the amount of tension, the contraction kinetics, the elastic properties and the effects of activity occur in muscular dystrophy in childhood, but not in adult life. They have demonstrated changes in the electrical activity which are consistent with a loss of contractile substance in adult dystrophic muscle. For these reasons, they believe that the fundamental disease process differs in these two types of primary muscular dystrophy. In addition, they have shown that the changes in the mechanical responses of the childhood dystrophic patients cannot be accounted for by abnormally low muscle temperature.

CHANGES IN BLOOD FLOW, OXYGEN UPTAKE AND TISSUE TEMPERATURES PRODUCED BY THE TOPICAL APPLICATION OF WET HEAT. D. I. Abramson *et alii*, *Arch. phys. Med.*, 1961, 42: 305-318 (May).

The authors have studied the effect of periods of 20 and 30 minutes of topically applied wet heat on blood flow, tissue temperature and oxygen uptake in the forearm. The clinical material consisted of 51 normal male subjects, and 52 experiments were performed. A pronounced increase in the local circulation was produced; all structures contributed to the response, including tissues located three or more centimetres below the surface of the skin. Associated with the augmentation in blood flow was a rise in temperature of skin, subcutaneous tissue and muscle. Short periods of exposure were not so effective as prolonged heating in elevating muscle temperature. During the application of wet heat for short periods of time, there was a pronounced increase in oxygen uptake. The authors point out that, even if the change had been of small magnitude, the use of wet heat in the presence of arterial insufficiency would still be contraindicated, mainly because of a loss of the cooling mechanism provided by the rapid increase in blood flow normally elicited by heat. As a result, there would be a trend towards an abnormally high rise in tissue temperatures, with a consequent elevation of metabolic needs which could not be satisfied. It is concluded that topically applied wet heat is a potent vasodilating agent in increasing local blood flow and in raising tissue temperatures even in deep structures. Moreover, it compares even more favourably with some of the elaborate procedures commonly used in physical medicine for such purposes, provided that high temperatures (up to 45°C.) can be maintained.

ANALYSIS OF SOUNDS FROM NORMAL AND PATHOLOGIC KNEE JOINTS. H. Fischer and E. W. Johnson, *Arch. phys. Med.*, 1961, 42: 233-240 (April).

The authors present the results of investigation of 25 normal adults, 25 patients with rheumatoid involvement of the knee and 25 patients with degenerative arthritis (osteoarthritis) of the knee. Sounds from knee joints passively moved in a standard manner were picked up with a sensitive microphone, recorded on a magnetic tape and later analysed with a sonic analyser and visually on an oscilloscope. The authors state that recognizable variations of sounds occur

on passive and active motion of the knees in such groups of subjects. In rheumatoid arthritis, these variations may occur before X-ray changes are evident. Changes in the sound pattern observed in diseased knees are probably due, in part, to an increase in the damping factor in these knees. More investigation in this area is highly desirable to evaluate other joints and diseases, as well as to make more quantitative studies.

EVALUATION OF PHYSICAL DISABILITIES BY MEANS OF PATIENT PROFILE CHART. O. L. Huddleston *et alii*, *Arch. phys. Med.*, 1961, 42: 250-257 (April).

THE authors present a patient profile chart which has been developed for the purpose of effectively and efficiently evaluating physical disability and functional capacity in the field of physical medicine. Values of muscle power and comparative functional capacities have been arranged so that they can be recorded graphically for quick comparison and rapid evaluation. The functional activity scores and muscle grades are recorded by dots on the chart for values measured, and subsequently connected from point to point to form a profile line. A muscle profile line is made for each side of the body, and a single functional profile line is recorded for the functional tests. Subsequent profile lines are recorded at selected intervals, and different colours are used for profile lines drawn for successive tests. In this way the progress made by the patient may be compared easily from the different coloured profile lines. Also, a quick comparison can be made between muscle power and functional capacity. The authors describe the clinical application of the patient profile chart, and recommend that the chart be used as a research instrument in the future.

AN ANALYSIS OF PSYCHOMOTOR RESPONSES OF ADULT HEMI-PLEGIC PATIENTS. C. W. Thomas *et alii*, *Arch. phys. Med.*, 42: 185-188 (March).

THE authors present the results of a comparative analysis of the performance in psychomotor tests between hemiplegic patients using only their so-called good hands and a group of control patients. They found that, within the limits investigated, the groups were relatively undifferentiated. Tasks with experiential qualities that tended to favour the dominant hand or two hands did distinguish right hemiplegics from the controls, and to a lesser degree, left hemiplegics from the controls. In one instance the difference between subjects with dominant hemispheric insult and those without brain damage appeared to be due to the right hemiplegics' greater tendency towards perseveration in a task requiring shifting from the concept of widths to that of lengths. All patients were similar in their relatively poor performance in tasks requiring abstraction, form discrimination and the perception of spatial relations. The differences, while generally not significant statistically, suggest the need for additional inquiry to determine whether psychomotor skills which show impairment due to brain damage and cerebral changes concomitant with aging can be obtained in a larger sample. The results obtained in the study do not support the contention that patients with dominant hemispheric involvement are more likely to be successfully rehabilitated from the vocational point of view.

CANCER ARTHRITIS AND RHEUMATOID ARTHRITIS. B. Strandberg and N. V. Jarlov, *Arch. phys. Med.*, 1961, 42: 273-278 (April).

THE authors have studied 53 patients with typical rheumatoid arthritis and 91 normal controls. All the 53 patients had been admitted to hospital during the previous five years for diagnosed rheumatoid arthritis. Review of the patients shows that they can be divided into two groups. In the first group, there were 27 cases. Hyland's rheumatoid-arthritides test produced a positive result in 96.3%, the serum alkaline phosphatase level was not elevated, paper electrophoresis of the serum proteins showed that the alpha-2-globulin level was elevated in 37%, and the antistreptococcal-hyaluronidase titre, the antistreptolysin titre and the result of the streptococcal agglutination test corresponded to the values found in major series of cases of rheumatoid arthritis. The second group comprised 26 cases; the result of the Hyland rheumatoid-arthritides test was positive in only 3.8%, the serum alkaline phosphatase level was elevated in 80.8%, the serum alpha-2 globulin level was elevated in 100%, and the gamma-globulin level, the antistreptolysin titre, the antistreptococcal-hyaluronidase titre and the result of the streptococcal agglutination test were comparable with the

values found in normal control subjects. The authors state that a repeated review of the second group of patients showed that the signs and symptoms of rheumatoid arthritis could be considered as the first clinical signs of cancer, later verified.

RÔLE OF ORTHETICS IN REHABILITATION OF HANDS IN QUADRIPLEGIA OF SPINAL ORIGIN. O. F. von Werssowetz, *Arch. phys. Med.*, 1961, 42: 279-285 (April).

THE author states that the essentials of any rehabilitation programme for the quadriplegic patient is to provide independent function of the hands with or without orthotic assistance. The selection of orthoses will depend on the severity and distribution of involvement, and on the degree of complicating deformities and contractures. Most patients with quadriplegia of about the level of the sixth cervical vertebra will require adaptive orthoses. A satisfactory orthosis should attempt to replace and reestablish the normal basic hand-arm movement pattern consisting of four phases—reach, grip, carry and release. The last three are usually very severely limited; they require mechanical substitution to provide some type of holding device, and adequate stabilization of proximal joints and an independent release function. For these patients a tubular adaptive orthosis is preferred; it permits easy exchange of everyday utensils, which can be accomplished by the patient by gross movement without much dexterity. The author describes a new method of attachment of this holding device to the extremity; it utilizes hinged metal clasps on the forearm extension. These clasps are activated by leaf springs in the hinges, and permit most patients to remove the orthoses independently of any outside assistance. The patient's function is much improved.

INFIRMARY REHABILITATION OF SCHOOL CHILDREN WITH CEREBRAL PALSY. H. Sobkowicz, *et alii*, *Arch. phys. Med.*, 1961, 42: 363-370 (May).

THE authors have tried an infirmary rehabilitation of 10 children with cerebral palsy. The children were aged six to 15 years. The rehabilitation treatment was divided into three periods: exercises in the hall, exercises in the water and pharmacological treatment with "Probamyl". All the children remained under neurological and electromyographic control—examination before and after each period of the treatment and two months after the end of the treatment. The whole treatment lasted 10 to 12 months. A clinical improvement was found in all the children during the treatment, as well as some time after its end. The clinical improvement concerned the improvement of the child's movements, as well as the diminishing of the spasticity. The rehabilitation treatment had in view the improvement of muscle coordination activity; on the other hand, it influenced very little the strengthening of the myostatic reflex. It is possible in this way to create or improve the dynamic stereotype of movement. The effect of "Probamyl", examined on the basis of electromyographic tracings, seems to be to strengthen the central inhibitory influences; this gives the tracing a shorter time of action and lessens the range and extensivity of pathological reactions. Analysis of the clinical and electromyographic findings suggests that joint pharmacological and rehabilitating therapy will produce a better movement result.

APPLICATION OF THE STRETCH AND HOFFMAN REFLEXES TO THE OBJECTIVE MEASUREMENT OF SPASTICITY. O. E. Miglietta and M. Lowenthal, *Arch. phys. Med.*, 1961, 42: 258-264 (April).

THE authors state that spasticity is encountered frequently in rehabilitation of patients with neuro-muscular disabilities. The evaluation of spasticity and of therapeutic procedures designed to control it remains a problem in clinical practice. Procedures previously described for objective evaluation of spasticity are either too elaborate for practical use, or else measure only in a qualitative manner the characteristics of the spastic muscle. The authors have approached the problem of evaluation of spasticity through a number of electromyographic parameters. They describe their experience with the stretch and Hoffman reflex in patients with various upper motor neuron disorders. They state that the methods developed have been tested under clinical conditions, and appear practical, readily reproducible and reliable. They discuss the neuro-physiological factors involved, the technical features of the methods and their application in clinical settings.

British Medical Association.

MEETING OF THE FEDERAL COUNCIL.

A MEETING of the Federal Council of the British Medical Association in Australia was held on October 20 and 21, 1961, at British Medical Association House, 88 L'Estrange Terrace, Kelvin Grove, Brisbane, Queensland. The President, Dr. H. C. Colville, was in the chair.

REPRESENTATIVES.

The following representatives of the Branches were present:

New South Wales: Dr. W. F. Simmons, Dr. A. J. Murray, Dr. R. H. Macdonald, Dr. E. F. Thomson.

Queensland: Dr. Robert Miller, Dr. Charles Roe.

South Australia: Dr. L. R. Mallen, Dr. C. O. F. Rieger.

Tasmania: Dr. L. N. Gollan, Dr. F. R. Fay.

Victoria: Dr. H. C. Colville, Dr. J. G. Johnson, Dr. T. G. Swinburne.

Western Australia: Dr. C. W. Anderson, Dr. D. M. Clement.

FINANCIAL STATEMENT.

The Honorary Treasurer, Dr. W. F. Simmons, presented the financial statement as at October 20, 1961. This showed that the amount due in capitation payments from a total membership of 10,942 was £19,148 10s. It was estimated that there would be an amount of £2253 standing to the credit of the Federal Council at December 31, 1961.

FEDERAL ORGANIZATION FUND.

The Honorary Treasurer presented the financial statement of the Organization Fund for the period ended September 30, 1961. This had been altered only by the addition of interest received. The credit balance stood at £1522.

FEDERAL INDEPENDENCE FUND.

The Honorary Treasurer presented the financial statement of the Federal Independence Fund for the period ended September 30, 1961. The credit balance of this fund was £26,748 6s. After discussion it was resolved that the money standing to the credit of the Federal Independence Fund should be transferred to the Australian Medical Association after incorporation, subject to the approval of the legal advisers.

ENTERTAINMENT FUND.

The Honorary Treasurer presented the financial statement of the Entertainment Fund for the period ended September 30, 1961. The credit balance was £39 4s. 2d.

HENRY SIMPSON NEWLAND PRIZE IN SURGERY.

The Honorary Treasurer presented the financial statement of the Henry Simpson Newland Prize Fund for the period ended September 30, 1961. The credit balance of the fund stood at £1140. It was mentioned that as yet no entries had been received for the current prize essay competition.

MEDICAL OFFICERS RELIEF FUND (FEDERAL).

On behalf of the Trustees, Dr. W. F. Simmons presented the report of the Medical Officers Relief Fund (Federal) for the six months ended June 30, 1961. The total assets of the fund stood at £6276. During the year an amount of £143 had been paid to three beneficiaries.

FEDERAL MEDICAL WAR RELIEF FUND.

On behalf of the trustees, Dr. Simmons also presented the Trustees' report of the Federal Medical War Relief Fund for the six months ended June 30, 1961. The total assets of this fund stood at £16,181. During the half year an amount of £420 had been paid to seven beneficiaries.

The Federal Council, after discussion, resolved to ask the trustees of both these funds to request the local committees of management to review the present rate of benefit to existing beneficiaries.

HONOURS.

It was noted that letters of congratulation had been forwarded to the following members of the medical profession who had received honours in the Queen's Birthday Honours List: Sir Douglas Miller, Kt.; Sir Reginald Matters, Kt.; Dr. J. O. Poynton, C.M.G.; Dr. John J. Power, C.B.E.;

Dr. Clive W. Uhr, C.B.E.; Dr. E. V. Corrie, M.B.E.; Dr. Fanny Reading, M.B.E. A letter of congratulation had also been forwarded to Sir Guy Dane, Kt., in the United Kingdom.

MEDICAL PRACTICE IN AUSTRALIA.

It was reported that approximately sixty inquiries had been received by the secretariat from doctors overseas desiring information on medical practice in Australia. A number of inquiries had also been received regarding post-graduate and hospital residency training.

CONFEDERATION OF MEDICAL ASSOCIATIONS OF ASIA AND OCEANIA.

It was noted that the Federal Council had been represented by Dr. K. C. Crafter of Adelaide and Dr. Adrian Paul of Sydney at the second General Assembly of the Confederation of Medical Associations of Australasia and Oceania held at Manila in the Philippines in April, 1961. A copy of Dr. Crafter's report on the congress was before the meeting as also were the resolutions adopted at the meeting, with comments by Dr. Crafter.

The Federal Council approved payment of an annual fee of \$10 to the confederation, and then considered the resolutions of the congress in the light of Dr. Crafter's comments.

The first resolution dealt with scholarships for deserving doctors from any member association seeking advanced study and research in another country sponsored by the member associations of the confederation. Dr. Crafter pointed out that there were difficulties in Australia's participation in this because of the distances involved, and he doubted whether Australia could go much further than what was being done at present unless someone endowed a scholarship. However, he considered that scholarships of the kind mentioned could help some of the Asian countries who were not so advanced medically as Australia. The Federal Council approved Dr. Crafter's recommendations.

Another resolution dealt with reciprocity of medical consultation among doctors in Asia and Oceania. This had apparently been a matter of concern in the relations between some of the Asian countries, but it was desired to establish some satisfactory arrangement. The Federal Council approved the resolution of the congress in principle where practicable.

Another resolution was that the council of the confederation be empowered to take all the necessary steps for the affiliation of the Confederation of Medical Associations of Australasia and Oceania to the World Medical Association.

The final resolution dealt with a project of sending medical experts of member associations of the confederation to countries in Asia and Oceania which were in need of such medical experts. The Federal Council expressed its approval in principle of the sending of such medical experts to countries which needed them.

TWELFTH QUADRENNIAL CONGRESS OF THE INTERNATIONAL COUNCIL OF NURSES.

It was reported that the following series of displays had been arranged by the Victorian Branch of the British Medical Association at the professional exhibition held in conjunction with the Twelfth Quadrennial Congress of the International Council of Nurses in Melbourne, and that the displays had been the subject of favourable comment: (i) a display demonstrating the history and evolution of the stethoscope arranged by Dr. Bryan Gandevia; (ii) a display demonstrating the problems of cross-infection arranged by Dr. Bryan Stratford; (iii) a heart-lung machine supplied by the Alfred Hospital. The Victorian Branch had been thanked on behalf of the Federal Council for arranging the exhibition.

INTERNATIONAL SOCIETY OF GEOGRAPHICAL PATHOLOGY.

At the meeting of the Federal Council in March, 1961, it was reported that a letter had been received from Professor E. J. ten Seldam of the University of Western Australia, conveying a request from Professor E. Roulet of Switzerland for the establishment in Australia of a section of the International Society of Geographical Pathology. The matter had been referred to the Royal Australasian College of Surgeons, The Royal Australasian College of Physicians and the College of Pathologists of Australia, who had replied advising that they did not desire to submit any particular comments on the proposal to establish a section of the society in Australia, but had no objection to individual members participating. The General Secretary said that this information had been sent to Professor ten Seldam.

LIFE ASSURANCE: FEE FOR EXAMINATION AND COMPLETION OF FORMS.

At the meeting of the Federal Council in March, 1961, it was resolved to request the Life Offices Association of Australasia (i) to increase the fee for life insurance examination and completion of the necessary form from £2 2s. to £3 3s. and (ii) to increase the fee payable to a general practitioner for submitting a report on a patient

to their patients for payment of their fees, in which cases the completed forms of examination would be handed to the patients.

AUSTRALIAN NATIONAL COMMITTEE ON ILLUMINATION.

The Federal Council approved the action of the Honorary Treasurer in paying the subscription of the Federal Council to the Australian National Council on Illumination.



The retiring Federal Council of the British Medical Association in Australia. Seated (from left to right): Dr. R. H. Macdonald, Dr. W. F. Simmons (Honorary Treasurer), Dr. J. G. Hunter (General Secretary), Dr. H. C. Colville (President), Dr. A. J. Murray (Vice-President), Dr. J. G. Johnson, Dr. R. R. Winton (Editor, THE MEDICAL JOURNAL OF AUSTRALIA), Dr. T. G. Swinburne, Dr. Charles Roe, Dr. Robert Miller. Standing (from left to right): Dr. C. O. F. Rieger, Dr. Edgar Thomson, Dr. C. W. Anderson, Dr. L. R. Mallen, Dr. C. J. Ross-Smith (Assistant General Secretary), Dr. L. N. Gollan, Dr. D. C. Clement, Dr. F. R. Fay.

(Photograph by courtesy of the Brisbane Courier-Mail.)

under his care from £1 1s. to £1 11s. 6d. When the request was conveyed to them the council of the Life Offices Association of Australasia had advised that it could not see its way clear to agree to increases of the magnitude suggested. However, subject to an undertaking being given by the British Medical Association to circulate its members informing them that the personal statement of the proponent must be completed either by or in the presence of an examining doctor at the time of the examination and, in the latter case, the doctor must peruse the answers, the council was prepared to agree that the standard medical fee should be increased from £2 2s. to £2 10s. and that the fee payable to a general practitioner for submitting a report on a patient under his care should be increased from £1 1s. to £1 5s.

After consideration of the Branches' comments on the letter from the Life Offices Association the Federal Council decided to inform that association that the profession was not prepared to accept any offer less than £3 3s. for life assurance examination and the completion of the necessary form, and £1 11s. 6d. for the supplying of a report by a general practitioner on a patient under his care; if that was not acceptable to the Life Offices Association for Australasia, then the profession would be advised to look

ARTIFICIAL RESPIRATION IN HANDBOOK OF FIRST AID.

Further consideration was given to a letter which had been received from the South Australian Branch requesting that Federal Council draw the attention of the publishers of the "Handbook of First Aid" which had been issued as a supplement to the *Reader's Digest* of January, 1961, to an omission in the article, as no reference had been made to first attempting to drain the water from a person who was supposed to be drowned. It was reported that the question had been referred to Dr. B. S. Clifton of the Royal Prince Alfred Hospital, Sydney, and that he had expressed the opinion that the article in question emphasized the need for rapid artificial respiration and that further reference to drainage was not necessary. It was reported that this had been conveyed to the South Australian Branch.

SCIENTIFIC EXCHANGES WITH THE SOVIET UNION.

A letter was received from the Minister for External Affairs, the Right Honourable R. G. Menzies, in response to a request conveyed through the Minister for Health regarding the Government's policy towards exchanges with the Soviet Union in the scientific, cultural and related fields. Mr. Menzies stated that the Government's present policy was to play a neutral rôle in those exchanges. It believed

that in Australia the initiative in arranging them should rest with those who would be playing the main part in them, in other words, the various persons and institutions such as professional associations, scientific bodies, universities and so forth, which handled the particular subject in which an exchange was desired. Thus in cases of exchange with the Soviet Union in the field of medicine the B.M.A. would be regarded as an appropriate body to conduct exchanges with the Soviet Union. It was further believed that exchanges were best arranged with the corresponding specialist body in the Soviet Union where one existed. Mr. Menzies said that he gathered that there was some doubt whether the Union of Soviet Medical Workers or some other body could be regarded as a corresponding body to the British Medical Association, and he was having inquiries made in Moscow and London on the point.

AUSTRALIAN PUBLICITY COUNCIL.

The General Secretary reported that he had been approached by the Executive Director of the Australian Publicity Council regarding the possible cooperation of Branches and individual B.M.A. members in Australia in the formation of a forthcoming publication of the Australian Publicity Council. The matter had been referred to the individual Branches, and it had been left in their hands.

AUSTRALASIAN MEDICAL STUDENTS' ASSOCIATION.

A copy of the constitution of the Australasian Medical Students' Association was received. It was reported that a copy had been sent to each of the Branches for their consideration.

THE FLEMING MEMORIAL FUND FOR MEDICAL RESEARCH.

The President, Dr. H. C. Colville, reported that he had received a letter from Viscount Tenby appealing for support for the fund for medical research that had been set up to commemorate Sir Alexander Fleming. Viscount Tenby had asked that either a corporate donation be made by the Association on Federal or State lines or its individual members be asked to contribute to the fund. The Federal Council decided to inform Viscount Tenby that it was unable to accede to his request to contribute to the Fund, but that it proposed to draw the attention of members of the Association throughout Australia to the appeal.

TITLING OF DENTISTS AS "DOCTORS".

As the result of a discussion of what was taking place in Tasmania the Federal Council at a previous meeting had expressed its disapproval of dentists titling themselves as "doctors" unless they held a doctorate. A letter was received from the Secretary of the Australian Dental Association advising that at the annual meeting of the Federal Council of the Australian Dental Association in August, 1961, it had adopted the principle that it did not consider it unprofessional or unethical for a dentist to use the title of "doctor", provided he coupled such usage with a clear designation that he was a dental practitioner. The letter set out three predominant factors which had influenced the adoption of the resolution: (i) the Fédération Dentaire Internationale, of which Australia was a member, used the title of "doctor" for all dentists in its member countries, apart from those entitled to be known as "professor"; (ii) the United States of America, Canada and South Africa all used the title of "doctor" for all dental graduates; (iii) all European qualified dentists used the title of "doctor", and that usage was retained in Australia, where many of them had entered into the practice of dentistry. The letter went on to say that the implementation of the policy was a matter for the various branches of the Australian Dental Association, and one of those branches had already taken action along the lines set out. It was considered by the council of the Australian Dental Association that the acceptance of the principle outlined was in no way in variance of the rights and privileges of the medical profession and indeed such an infringement was not the intention of the resolution. The correspondence was received so.

INCOME TAX: DEDUCTIBLE ALLOWANCE FOR ENTERTAINMENT.

A letter was received from the Tasmanian Branch advising, for information, that claims for entertainment during medical congresses were not allowable for income tax purposes. A member of the Branch had taken the matter to the Board of Review, but had obtained no satisfaction, the Board upholding the rule of the Deputy Commissioner by two to one, that the expenditure was of a personal nature. The Branch considered that the decision would have far-reaching effects on other members of the

medical profession throughout Australia because, acting on the Board of Review ruling, the Taxation Department might disallow all similar expenditure incurred by other members of the medical profession throughout Australia, both now and in the future. After discussion the Federal Council resolved to take no action in the matter.

AUSTRALIAN MEDICAL CONGRESS.

Henry Simpson Newland Oration.

At its meeting in March, 1961, the Federal Council resolved to invite Dr. S. Gilder, Editor of the *World Medical Journal*, to deliver the fourth Henry Simpson Newland Oration at the Australian Medical Congress to be held in Adelaide in 1962. It was reported that Dr. Gilder had accepted the Federal Council's invitation. At the suggestion of the Executive Committee of Congress Federal Council resolved that a medal be struck for presentation to the person delivering the Henry Simpson Newland Oration.

Invitations to Overseas Bodies.

The General Secretary reported that invitations to attend the Inaugural Meeting of the Australian Medical Association and the Australian Medical Congress had been extended to the British Medical Association in London, the World Medical Association and various other medical associations. The response to date had been very favourable, and it was expected that there would be a wide representation from overseas at the congress. It was expected that the British Medical Association would be represented by the President, the Chairman of Council and the Secretary, and the World Medical Association by, amongst others, the Secretary-General.

Australian Film Festival.

The General Secretary reported that Johnson and Johnson Pty. Ltd. had offered to stage an Australian Film Festival in conjunction with the Congress. The offer had been accepted, and a very good programme of films was anticipated.

AUSTRALASIAN MEDICAL PUBLISHING COMPANY LIMITED.

A report was received of a meeting between the Directors of the Australasian Medical Publishing Company Limited and the Executive Officers of the Federal Council which had taken place in March, 1961, to discuss the publication in Australia of a magazine of the type of *Family Doctor*. It appeared doubtful that it was practicable to proceed with such a venture at the present time, and the Federal Council took no action in the matter.

Copyright of Material in "The Medical Journal of Australia".

The General Secretary reported that, as a result of a request from the Victorian Branch, a legal opinion furnished by courtesy of the New South Wales Branch had been obtained regarding the copyright of material appearing in THE MEDICAL JOURNAL OF AUSTRALIA. The request had resulted from concern at the publication of extracts in the newspapers from articles published in the Journal. The legal advisers had stated in their opinion that the copyright in an article published in THE MEDICAL JOURNAL OF AUSTRALIA would belong to the author of the article, but it might be assigned by the author to the Publishing Company, and if that were done then the copyright would be the property of the Publishing Company. Copyright in respect of an article published in the Journal meant the sole right to produce or reproduce the article or any substantial part thereof. The copyright was infringed by any person who, without the consent of the owner of the copyright, did anything in respect of the article the sole right to do so which was, by the *Copyright Act*, conferred upon the owner of the copyright. It was, however, provided by the *Copyright Act* that any fair dealing with any work for the purposes of private study, research, criticism, review, or newspaper summary, should not constitute an infringement of copyright. If an article appearing in THE MEDICAL JOURNAL OF AUSTRALIA were reproduced in full or to a substantial extent in the lay Press, the legal advisers would consider that the reproduction would be an infringement of the copyright. If only a reasonable summary of the article was published in the lay Press, they would not consider that the publication of the summary would amount to an infringement of copyright in the article.

Ordinary General Meeting.

A notice was received of the forty-eighth general meeting of the Australasian Medical Publishing Company to be held in Sydney on November 15, 1961.

Membership.

The Federal Council resolved that representation be made to the Australasian Medical Publishing Company Limited to request that with the formation of the Australian Medical Association the Federal Council of that body should be granted representation so far as membership of the Company was concerned on a parity with the Branches. It also recommended to the Branches that elections for membership of the Company be held every three years.

AUSTRALIAN MEDICAL ASSOCIATION.

Memorandum and Articles of Association.

The Federal Council had before it the copies of the final memorandum and articles of association of the Australian Medical Association as accepted by the Attorney-General for registration. After signature by the interim council of the Australian Medical Association they would be forwarded to the Attorney-General for completion of registration.

The Branches and the Association.

Letters were received from the Queensland Branch and the Western Australian Branch advising that, in spite of reservations expressed at the meeting of the Federal Council in June, 1961, both Branches had decided to join the Australian Medical Association.

The General Secretary reported that he had been in correspondence with the several Branches regarding the legal machinery involved in their becoming Branches of the Australian Medical Association. The Branches had been advised of the desirability of informing the Parent Body of their intended separation.

NATIONAL HEALTH SERVICE.

Pensioner Medical Service.

At its meeting in March, 1961, the Federal Council, following on a protracted series of negotiations with the Minister for Health, decided to amend the requested increase in fees payable by the Government under the Pensioner Medical Service to the following: surgery consultation from 11s. to 13s., domiciliary visits from 13s. to 15s. This decision was based on the fact that the figures of 13s. and 15s. were such as to allow a realistic 40% rebate from current fees in general practice throughout Australia. A request for this revised scale of fees was then transmitted to the Minister for Health, it being the intention of Federal Council to seek an interview on the subject, should its representations not meet with success.

In August, 1961, a letter was received from the Minister for Health advising of the Government's decision to increase the fees in the following terms: surgery consultation from 11s. to 12s., domiciliary visits from 13s. to 14s., the agreement to be for three years. The letter from the Minister for Health was sent to the Branches for their consideration, and the views of the Branches were before the Federal Council. The Queensland, New South Wales and Victorian Branches were opposed to acceptance of the Minister's offer. The South Australian Branch was prepared to accept the increase offered for one year only, while further negotiations were being carried on. The Western Australian Branch was prepared to accept the Minister's proposal provided that it was agreed that the proposal should be subject to annual review. The Tasmanian Branch was prepared to accept the scale of fees mentioned, but considered that the Federal Council should press for the same scale as that operating with the Repatriation Department.

After further discussion the Federal Council passed a resolution in the following terms: (i) That the proposal of the Minister for Health that the rates of payment to medical practitioners rendering service under the Pensioner Medical Service be increased by 1s. and that the agreement be for three years be rejected; (ii) that a deputation wait on the Prime Minister on the matter; (iii) that the Prime Minister be requested to agree to the request of the medical profession for an increase in the fees payable to medical practitioners for services rendered under the Pensioner Medical Service in the terms already suggested to the Minister for Health; (iv) that the Prime Minister be requested to agree that the agreement be for a period of two years.

Participation of Specialists.

At its meeting in March, 1961, the Federal Council gave further consideration to a matter previously brought forward by the New South Wales Branch, that of participation of specialists in the Pensioner Medical Service. It then reaffirmed its opinion that the Pensioner Medical Service was a general practitioner service and should be restricted

to members of the profession practising as general practitioners, and decided to take up the matter again with the Minister for Health. The Minister, in his reply, had expressed the opinion that the primary consideration was the provision of a general practitioner service to pensioners. He said that the *National Health Act* provided that the Director-General might, on behalf of the Commonwealth, enter into an agreement with any duly qualified medical practitioner and did not limit participation to general practitioners. The fact that some practitioners did in fact hold higher qualifications was merely incidental and in no way prevented their participation in the Pensioner Medical Service. The relative status of the medical practitioners enrolled in the scheme was immaterial to the provision of the general practitioner service. A specialist was not obliged to enter the scheme—he did so of his own free will—and it could not be said that the department had extended the scope of the Pensioner Medical Service simply because some specialists had chosen to enrol in a general practitioner service. In fact, that had been the position ever since the inception of the service. In any case the Minister considered that it would be not only highly undesirable but beyond his power to decide which doctors should be eligible to participate and which should not, especially as a specialist was not defined in the *National Health Act*.

Subsequently the Western Australian Branch recommended that Federal Council give consideration to reaffirming the resolution passed at its March meeting, and to requesting that Branch Councils draw the attention of any member in specialist practice participating in the Pensioner Medical Service to that opinion and request the specialist to withdraw from such participation.

After further discussion the Federal Council resolved to advise Branches that the Pensioner Medical Service was a general practitioner service and that specialists should not enrol as participating doctors unless they were prepared to give a full general practitioner service.

Signing of Vouchers.

A letter was received from the Victorian Branch enclosing copies of correspondence with the Commonwealth Director of Health in Victoria relating to the interpretation of the conditions under which a Pensioner Medical Service voucher might be signed by a "responsible person". This was a departure from previous procedure. The Federal Council, after consideration of the correspondence, resolved that there should be no restriction on the person signing the voucher other than that which obtained at present.

Pensioners in Public Beds of Hospitals with No Resident Medical Staff.

A letter was received from the Victorian Branch relating to the payment of doctors for attendance on pensioners occupying beds in hospitals with no resident medical staff. The letter said that members of the Victorian Branch who were participants in the Pensioner Medical Service and who held honorary appointments to country hospitals, in which no resident staff was employed, considered it unreasonable that under the Service no fees might be claimed for the services they rendered to pensioners occupying public beds. They maintained that they were called upon to provide personal services which in larger hospitals were performed by resident medical officers and which, if carried out in a pensioner's home, would be paid for on submission of signed vouchers. Further, it was regarded as anomalous that, when a pensioner was seriously ill and his condition warranted admission to hospital with consequent additional demands being made on his medical attendant, remuneration for professional services ceased. It was, therefore, the opinion of the executive of the Council of the Victorian Branch, that Federal Council should make representations to the Minister for Health requesting modification of the P.M.S. terms of service to permit participating doctors to claim fees for attendance on pensioners occupying public beds in public hospitals with no resident medical staff.

The Victorian Branch Council's letter was discussed, but it soon became apparent that the position differed considerably in the different States, depending upon the policy of the State hospital authorities. The Federal Council resolved to take no action in the matter.

Pharmaceutical Benefits.

Restricted Pharmaceutical Benefits.

At its meeting in March, 1961, the Federal Council resolved to recommend to the Minister for Health that the list of restricted pharmaceutical benefits be abolished, and that

if the Government should be unwilling to abolish the restricted list it should be urged that the list in any case be reviewed with the aim of drastically reducing the number of restricted drugs. It further resolved that the preparation of a list of drugs which should be removed from the restricted list should be left to the special committee consisting of Dr. J. G. Johnson and Dr. W. F. Simmons. Subsequently the special committee acting in consultation with Dr. D. G. Hamilton and Dr. A. E. McGuinness of Sydney, and Dr. F. L. Frew and Dr. Bryan Gandevia of Melbourne, had prepared a list, which was forwarded to the Minister. The Federal Council approved the recommendation of the special committee.

Doctors' Bag Supplies.

At its meeting in November, 1960, the Federal Council approved a list of additional drugs which it considered should be added to the existing list of available Doctors' Bag Supplies, and the Minister for Health was subsequently requested to include those drugs in the list. The General Secretary reported that a subsequent letter from the Minister had advised that five items were to be added to the list—namely, adrenaline-in-oil, heparin, sulphamethoxy-pyridazine, tetanus antitoxin and tetanus toxoid (formalinized)—and that two were deleted—namely, dihydromorphone hydrochloride and diphtheria antitoxin.

Supply of Pharmaceutical Benefits to Inmates of Children's Homes.

At its meeting in March, 1961, the Federal Council resolved to make a further approach to the Minister for Health with a view to having pharmaceutical benefits supplied free of charge to the inmates of children's homes. The Minister, in his reply, stated that at the time that the 5s. charge was introduced, the Government was prepared to exempt only persons in possession of the Pensioner Medical Service entitlement card from making the payment. As that was still the legal position, he regretted that he was unable to exempt the organizations referred to by the Federal Council. However, when further amendments to the *National Health Act* were contemplated, the representations of the Federal Council would be given consideration.

Dispensing Fees Payable to Members who do their Own Dispensing.

At its meeting in March, 1961, the Federal Council considered letters received from the Victorian and South Australian Branch relating to members who did their own dispensing. It was pointed out in the letters that an anomalous situation existed whereby chemists were paid dispensing fees for dispensing ready-prepared preparations under the National Health Service while "approved doctors" were not. The matter had been taken up with the Minister for Health, but he had stated that the positions of chemists and "approved doctors" were not comparable. It was decided to make further inquiries. Subsequently an approach was made to the Repatriation Department, and the chairman of the Repatriation Commission had advised that for local medical officers payment for prescriptions was in accordance with, and on the same basis as, that applying to pharmacists, including dispensing fees.

The Federal Council resolved to refer the matter back to the Branches with the additional information that had been obtained.

Additional Benefits.

The Federal Council had before it a list of drugs the addition of which to the list of benefits had been requested by the Branches or other bodies within the medical profession. These requests had been forwarded to the Director-General of Health.

A letter from the New South Wales Branch recommending restrictions of "Celbenin" to use in hospital practice had also been forwarded to the Director-General. The Federal Council expressed approval of this request for the control of the use of "Celbenin" and its restriction to hospital practice.

A letter from the Victorian Branch forwarded a recommendation of the State Council of Combined Pensioners' Associations for inclusion in the schedule of influenza vaccine as a benefit for pensioners. The recommendation had received the approval of the Branches and was approved by Federal Council.

Statistics Relating to Pharmaceutical Benefits.

At its meeting in March, 1961, the Federal Council decided to ask the Department of Health to furnish statistics

relating to the number of prescriptions which were provided under pharmaceutical benefits schemes if and when they were available. The matter had been referred to the Director-General of Health, who had supplied statistics which were before the meeting.

Visits to Doctors by Pharmacists of the Commonwealth Health Department.

The Federal Council considered discussions that had taken place between the Minister for Health and the President, Dr. H. C. Colville, relating to the extension of the system of personal visiting of Commonwealth Health Department pharmacists to individual doctors to discuss aspects of the pharmaceutical benefits scheme. The Minister had requested the cooperation of Federal Council in regarding this extension favourably.

In discussion it was pointed out that these visiting pharmacists were not to be confused with inspectors policing the pharmaceutical benefits scheme. It was advised that information on the matter had been passed to the several Branches.

Storage and Distribution of Vaccines.

Further discussion took place on the storage and distribution of vaccines, and in particular of tetanus toxoid. A letter from the New South Wales Branch that was before the Federal Council requested that the council take up with the Director-General of Health the reason why tetanus toxoid now required such strict refrigeration, whereas in World War II the product was successfully used after storage in an unrefrigerated state.

In the subsequent discussion it was pointed out that wartime conditions could not be regarded as a criterion of what was desirable in peace time, and it was important that the best possible conditions should be maintained in the handling of such material. However, it was apparent that considerable confusion on the matter still existed, and Federal Council asked Dr. W. F. Simmons to bring the matter before the National Health and Medical Research Council.

Medical Benefits.

Anomalies in Schedule of Benefits.

A letter was received from the New South Wales Branch recommending that Federal Council request the Government to review the schedule of medical benefits with a view to reducing the proportion of average cost of service which was borne by contributor and forwarding statistics relating to this question. A considerable number of letters were also before the meeting in which Branches and specialist societies raised the various anomalies in the schedule of benefits.

After consideration of this correspondence the Federal Council resolved: (i) That an approach be made to the Commonwealth Government requesting it to review the whole schedule of medical benefits with a view to reducing the proportion of average cost of services being borne by the contributor; (ii) that an anomalies subcommittee of Federal Council be appointed to review the schedule of benefits and to formulate the recommendations for the Federal Council to submit to the Commonwealth Government; (iii) that the subcommittee be instructed to coopt representatives of the specialist bodies of federal level in dealing with matters that concerned them; (iv) that Dr. A. E. Lee, Dr. E. S. Stuckey and Dr. K. S. Jones be invited to be members of the anomalies subcommittee.

In response to another letter from the New South Wales Branch the Federal Council resolved to make a further protest to the Federal Government in regard to the non-payment of benefit under the *National Health Act* when glasses were prescribed for the contributor to a medical benefits fund.

A letter from the Queensland Branch forwarded the proposal that an extra benefit, at least 25% to 30%, be paid to full-time specialists on all items on the schedule. The Federal Council did not approve this suggestion but reaffirmed its opinion that there should be optional scales of contribution which would allow higher benefits being paid to contributors and that the Commonwealth Government and medical benefit organizations be advised accordingly.

Leaflets.

At its meeting in March, 1961, the Federal Council, in response to a letter from the Minister for Health, relating to leaflets being distributed by doctors in one State with their patients' accounts, expressed the opinion that the distribution of leaflets advocating that the public join a

medical benefits organization should not specify one particular organization, but should list the names of all registered medical benefit organizations in the State concerned. A letter before the meeting from the Queensland Branch enclosed a sample card to be supplied by the Queensland Council of National Health Benefit Organizations to doctors for distribution with accounts. This advocated the joining of benefit organizations and listed a number of organizations.

Payment of Benefit Contributions for Contributors Receiving Unemployment or Sickness Benefits.

A letter was received from the Queensland Branch recommending that, an approach be made to the Government requesting legislation to provide that, when a member of a registered medical and hospital benefits fund qualified for unemployment or sickness benefit, his contributions to that fund should be paid by the Commonwealth so long as he remained entitled to unemployment or sickness benefit; the payment should be in addition to his normal benefits and be paid to the fund direct, irrespective of whether or not his contribution was due at that time. The letter was discussed, but as some of the States had not had time to consider the matter no action was taken.

Hospital Benefits.

Special Accounts.

At its meeting in March, 1961, Federal Council resolved to make representations to the Commonwealth Department of Health, so that persons over the age of 65 years and those who had been transferred to the special accounts list should be able to obtain hospital benefits to which they were legally entitled because of the acute nature of their disability when in-patients of smaller private hospitals. In a reply to the Federal Council the Minister for Health had pointed out that about 80% of claims of this type were accepted. Federal Council decided to take no further action in the matter.

Benefits for Mothers and Babies Hospitalized Together.

A letter was received from the Australian Paediatric Association requesting that consideration be given by Federal Council to the matter of provision of hospital benefits for mothers as well as babies when both were hospitalized. The matter had been previously raised in 1957 by the Western Australian Branch, and the Federal Council had supported the proposal. However, the Minister for Health had not then been prepared to agree to vary the existing arrangement. After discussion the Federal Council approved the submission of the Australian Paediatric Association and decided to make a further approach to the Minister for Health in the matter.

ACCREDITATION OF HOSPITALS.

A discussion took place on the accreditation of hospitals and consideration was given to a statement on the subject prepared by Dr. E. F. Thomson for submission to the Branches. The statement was approved.

BRITISH MEDICAL ASSOCIATION.

Overseas Rate of Subscription.

A letter was received from the Secretary of the Parent Body of the British Medical Association, advising of the Council's recommendation at the annual representative meeting in July, 1961, to increase the overseas rate of subscription from £2 12s. 6d. to £3 3s. sterling. A subsequent letter from the financial comptroller of the Parent Body advised of the decision to fix the rate at £3 3s. sterling as from January 1, 1962.

Roll of Fellows.

A letter was received from the Tasmanian Branch advising that the Parent Body of the British Medical Association had conferred fellowship on the following members of the Branch: Dr. J. H. B. Walch, Dr. C. Craig, Dr. Franklin R. Fay, Dr. T. C. Butler, Dr. W. E. L. H. Crowther. It was reported that the President, Dr. H. C. Colville, had visited Hobart to present scrolls of fellowship to these members on July 22, 1961.

B.M.A. Personal Accident Insurance Scheme.

A letter was received from the General Manager of the Medical Insurance Agency (B.M.A.) advising of (i) the intention to write to all Australian doctors participating in the B.M.A. Personal Accident Insurance Scheme notifying them of the inability of members of the Australian Medical

Association to continue in the present B.M.A. scheme, and (ii) special arrangements made at the request of the Western Australian Branch whereby members of the Australian Branches now participating in this scheme could obtain cover until the end of 1962, even though B.M.A. membership would terminate at the end of 1961.

A letter to the Federal Council from the Western Australian Branch recommended that Federal Council request the Parent Body to continue participation of members of the Australian Medical Association in the scheme beyond December 31, 1962. The Federal Council discussed this request, but it failed to gain support, and a motion from the Western Australian Branch along the lines of the Branch's letter was lost.

SIXTH BRITISH COMMONWEALTH MEDICAL CONFERENCE.

A financial statement was received from the financial comptroller of the British Medical Association relating to the Sixth British Commonwealth Medical Conference held in New Zealand in February, 1961. It was advised that the actual cost of the conference was £5746, Australia's liability being £625 sterling.

CANADIAN MEDICAL ASSOCIATION.

A copy of a report was received prepared by the delegation of the Canadian Medical Association which visited Australia in February and March, 1961.

NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL.

Copies were received of the official report of the fiftieth session of the Australian National Health and Medical Research Council held in October, 1960, and a personal report from Dr. W. F. Simmons of the fifty-first session held in May, 1961.

National Advertising Code.

It was reported that Dr. C. J. Ross-Smith, Assistant General Secretary, had attended a meeting of the expert advisory committee to consider the fourth draft of an Australian code of standards in advertising when it met on July 20 and 21, 1961.

Medical Statistics.

A letter was received from the secretary of the Medical Statistics Committee inquiring whether information derived from national health statistics was of value to the British Medical Association in Australia. The Federal Council resolved to advise the committee that this type of information was of interest and value and that the Council would be interested in all statistics available including attendances and procedures.

A letter was also received advising that the Medical Statistics Committee was commencing work on proposals for the eighth revision of the WHO International Classification of Diseases, 1965, and requesting any suggestions from Federal Council. It was resolved to suggest to the committee the cooption of the services of the Federal Council of the Australian Association of Medical Record Librarians.

COMMONWEALTH HEALTH DEPARTMENT.

Conditions of Service of Part-Time Medical Officers.

At its meeting in March, 1961, the Federal Council decided to take up with the Commonwealth Department of Health the conditions of service of part-time medical officers with particular reference to a position that had been advertised of consultant to the Education Clinic in the Australian Capital Territory. In reply to the letter from the Federal Council the Director-General of Health had advised that his department had no alternative but to adhere to the approved Treasury scale of fees paid.

After further discussion the Federal Council resolved to approach the Commonwealth Director-General of Health again requesting that the medical officer (part-time) appointed as consultant to the Education Clinic in the Australian Capital Territory be paid at the concessional rate of a junior specialist.

WORLD MEDICAL ASSOCIATION.

Fifteenth General Assembly.

The General Secretary reported on the fifteenth general assembly of the World Medical Association which he had attended in Rio de Janeiro, in September, 1961. He also reported that the information on the training of medical personnel in Papua which had been received from the

Australian Minister for Territories had been passed on to the Assembly and had been favourably received.

International Code of Medical Ethics in War Time.

A copy was received from the Australian Red Cross Society of its submission to the board of governors of the Red Cross Society on the matter of a protective emblem for doctors and a code of medical ethics in wartime. This had been presented at the meeting of the board of governors in September, 1961.

Secretariat.

Advice was received of the appointment of Dr. Harry S. Gear as Secretary-General of the World Medical Association. Dr. Gear had been appointed at the forty-first session of the council of the World Medical Association held in April, 1961, and assumed office in July, 1961.

Second World Conference on Medical Education.

It was reported that eleven copies had been received of the proceedings of the Second World Conference on Medical Education held in Chicago in August and September, 1959. The copies had been distributed to the Branches and the post-graduate committees.

A request had been received from the Secretary-General of the World Medical Association for comments and recommendations for consideration by the Medical Education Committee in planning the programme for the Third World Conference on Medical Education.

As the World Medical Association had requested that comments be made on the proceedings of the Second World Conference, the Federal Council resolved to ask the New South Wales Branch that it allow the committee appointed by that Branch to consider and report on the findings of the conference and that the committee should have the power to coopt. Suggestions were made of persons considered suitable for cooption.

World Health Organization.

It was reported that the Assistant General Secretary had attended the meeting of the Regional Committee of the World Health Organization for the Western Pacific held in New Zealand from August 31 to September 5, 1961, as the representative of the World Medical Association.

Reverting to a matter discussed at previous meetings the Federal Council resolved to proceed with its intention to interview the Minister for Health requesting that the practising medical profession should have representation at meetings of the World Health Organization at the expense of the Commonwealth Government.

Supporting Committee.

The Honorary Treasurer presented the financial statement of the Australian supporting committee of the World Medical Association. This showed a balance of £5395 as at October 20, 1961. Since December 31, 1960, the following amounts had been received: New South Wales Branch, £1244; Victorian Branch, £50; Queensland Branch, £33 9s.; South Australian Branch, £228 5s.

REPATRIATION DEPARTMENT.

Local Medical Officers.

At its meeting in June, 1961, the Federal Council resolved to seek an interview with the Prime Minister through the Minister for Repatriation in regard to the rates of payment to local medical officers rendering services to beneficiaries under the Repatriation Department. However, as the result of representations to the Chairman of the Repatriation Commission, the following increases requested by the Federal Council were approved: surgery consultations, increased from 13s. to 15s.; domiciliary visits, increased from 15s. to 17s. 6d. The increases were to apply for three years as from July 1, 1961, and would be effective from that date. The Chairman of the Commission advised that they would apply to the treatment of the following persons: (i) ex-servicemen and ex-servicewomen in respect of any disability, treatment of which had been authorized by a deputy commissioner on a form 83A or 83AA held by the local medical officer and (ii) the dependants of a deceased ex-serviceman or ex-servicewoman who had been authorized by a deputy commissioner on a form 174 to receive treatment from a local medical officer.

A letter was also received by the President from the Chairman of the Commission referring to the proposals of the

department in relation to the future appointment of local medical officers. In it the Chairman stated that in future the commission proposed to appoint local medical officers who were prepared to treat all classes of departmental patients. The present arrangement whereby certain practitioners treated only widows and dependants would not, however, be disturbed. Whilst in principle there would appear to be advantages in placing widows and dependants on the list of particular local medical officers, as applied to other departmental patients, for administrative reasons a change in the system did not appear practicable at the present time. The Chairman said that the Commission would be glad to consider any comments Federal Council might make on the matter. Copies were attached of amended "application form for appointment as a local medical officer", "schedule of fees for local medical officers" and "conditions of appointment for local medical officers", prepared by the Department.

The Federal Council resolved to approve the rates of payment and uniform terms of the appointment of local medical officers.

As the result of representations from the Federal Council a letter was received from the Chairman of the Commission agreeing to adopt the size of prescription forms proposed by the Federal Council, namely eight inches by four and a half inches, to permit the number of repeats to be two instead of one, and to remove the restriction of three items only to a prescription. The department was unable to accept a request that the "life" of a prescription be extended from two months to six months in view of certain problems raised by the Pharmaceutical Guild in Australia.

Disclosure of Confidential Medical Information.

At its meeting in March, 1961, the Federal Council resolved to discuss with the chairman of the Repatriation Commission the matter of local medical officers being required to furnish confidential information on repatriation pensioners other than those with accepted war disabilities without the consent of the patient. As the result of correspondence with the chairman of the commission he had forwarded a draft of an amended voucher designed to overcome the problem under discussion.

After further discussion the Federal Council resolved to ask the Repatriation Department to take no action in the matter.

Ophthalmological Services for Service Pensioners.

A letter was received from the South Australian Branch forwarding the report of the Deputy Commissioner of Repatriation, South Australia, on a meeting held on June 16, 1961, with representatives from the South Australian Branch and the South Australian State Section of the Ophthalmological Society of Australia (B.M.A.) to discuss the referral of repatriation patients to ophthalmologists in that State. It had been reported at a previous meeting that difficulty was being experienced on this matter, but it had now been satisfactorily resolved.

Pension Cards for all Repatriation Treatment.

A letter was received from the New South Wales Branch forwarding a further recommendation that the Repatriation Department be requested to issue its pensioners with an entitlement card similar to those issued to war widows, listing disabilities and thus giving pensioners the right of free choice of doctors. This request had been previously considered at the meeting of the Federal Council in March, 1961, and had not been supported. It again failed to find support.

Sessional Fees Payable to Specialists.

As the result of a letter from The Royal Australasian College of Physicians advising that the revised scale of fees effective on March 1, 1961, was considered unsatisfactory and requesting further discussions with the object of making further representations to the Department, an invitation had been extended to the Royal Australasian College of Surgeons and the College of Radiologists of Australasia to nominate representatives for a meeting with The Royal Australasian College of Physicians. It was reported that the meeting had taken place in the Federal Council office in Sydney on August 21, 1961, and it had been decided that the scale of fees was inadequate and unacceptable, and that the Department should be requested to adopt the original scale of fees proposed. The matter was subsequently referred to the Repatriation Department which had asked for further information, and the matter had again been referred to the Colleges.

Fee for Supply of Clinical Notes.

A letter was received from the South Australian Branch recommending an increase in fee from £1 1s. to £2 2s. for the supply of clinical notes (form MF 12 revised). A letter was also received from the Royal Australasian College of Surgeons recommending that the payments for reports supplied by consultants to the Repatriation Commission should be brought into line with the amounts paid by the insurance companies for similar reports.

The Federal Council resolved that in the event of the Royal Colleges accepting an invitation to join a deputation to meet the chairman of the Repatriation Commission, the Colleges be advised that the matter could be raised at the conference. The South Australian Branch's suggestion was not approved by the Federal Council.

AUSTRALIAN COUNCIL OF SOCIAL SERVICE.**Commonwealth Legislation Governing Adoption.**

It was reported that, as a member of the Australian Council of Social Service, the Federal Council had been advised by that body of the proposal of the Commonwealth Government to introduce legislation governing adoption. Comments were invited.

The General Secretary said that the matter had been referred to the Branches for their comments, so that in due course the Federal Council might advise the Australian Council of Social Service of the profession's coordinated views on the problem. Further information was being awaited on the Government's proposal.

WORKERS' COMPENSATION ACTS.**Commonwealth Employees Compensation Act, 1930-1956.**

As the result of representations from the Federal Council a letter was received from the Federal Treasurer in May, 1961, advising that at no time had there been any direction of the Commissioner for Employees' Compensation that Commonwealth employees were required to give up the services of their private medical advisers for honorary medical officers in private hospitals. This letter was circulated to the Branches for their information. Subsequently a letter was received by the Hawkesbury Hospital from the Commonwealth Department of Works advising that employees injured at work were to be classified as public patients. The matter had again been referred to the Commissioner by the Branch, but the reply was not regarded as satisfactory. In view of this the New South Wales Branch had asked the Federal Council to take the matter up again with the Commonwealth Government. The Federal Council discussed the matter and decided that, in view of the assurance previously given by the Treasurer of the Government's policy regarding medical treatment of Commonwealth employees, this type of complaint could most appropriately be dealt with at State level.

At its meeting in March, 1961, the Federal Council resolved to approach the Department of Social Services requesting that fees paid to general practitioners for services rendered to the department on a sessional basis be at the rate of £4 4s. for the first hour, £3 3s. for the second hour and £2 2s. for each subsequent hour. The Director-General of Social Services subsequently advised that the Treasurer had approved of increased fees, effective as from March 1, 1961, as follows: for first hour, £3 3s.; for each subsequent half hour, £1 1s.

Advice was also received from the Department of Social Services of a new scale of fees for specialists working for the Department. The rates were the same as those currently paid by the Repatriation Department.

Commonwealth Rehabilitation Advisory Committee.

At its meeting in March, 1961, Federal Council decided to ask Dr. D. Galbraith to interview the Director-General of Social Services for the purpose of discussing rehabilitation. Subsequently Dr. Galbraith said that he was of the opinion that no common ground existed on which the Association and the Department could meet in any plan to improve and extend rehabilitation services, and recommended that Federal Council make strong proposals to the Federal Government. Similar views were expressed by Dr. Selwyn Nelson, the Federal Council representative on the Commonwealth Rehabilitation Advisory Committee.

After further discussion the Federal Council decided to take up the matter of rehabilitation services in Australia with the Minister for Health and the Director-General of Health with a view to having control of such services placed under the Department of Health.

Form S.R.6.

A letter was received from the Director of Social Services advising that an amended form S.R.6 had been decided upon incorporating certain of the suggestions made by a subcommittee of the Federal Council and subsequently forwarded to the Department by the Federal Council. A draft of the new form was enclosed for information. It was noted that the new form was more satisfactory than it had been, although all the Federal Council's suggestions were not incorporated.

Rehabilitation Services in Australia.

A letter was received from the Queensland Branch forwarding information on two cases in which employment in Commonwealth Departments had been terminated because of physical handicaps, and requesting Federal Council to take up the matter with the Government. After discussion the Federal Council resolved to take up with the Commonwealth Government the matter of employment of physically handicapped persons.

ARMED FORCES.**Medical Defence Cover for Members.**

At its meeting in March, 1961, the Federal Council resolved to support a request from the South Australian Branch that the Crown be asked to define its policy in regard to medical defence cover for members of the armed forces. The General Secretary reported that the matter had been referred to the chairman of the Medical Services Committee but was still under consideration.

Department of the Army.**Fees.**

It was reported that the question of concessional fees payable to members of recruitment medical boards, local allowances payable to medical officers and increased allowances for area medical officers had all been under consideration by the Department of the Army. An increase had been agreed to in the sessional fees payable to members of recruitment medical boards, but the other two matters were still under consideration.

Extension of Medical Care to Army Dependents.

A letter was received from the Director-General of Medical Services of the Army advising of his intention to request the Military Board to approve free medical attention as a privilege, not as a right, to service dependents so wishing it, where medical officers were available, and requesting Federal Council's assistance in achieving this. One of the reasons advanced for the extension of medical care to army dependents was to make the conditions of service in the army more attractive to medical officers by broadening their experience.

The Director-General's letter was referred to the Branches, the majority of which opposed the scheme. The Federal Council, after discussion, also opposed the proposals of the Director-General, but made the following suggestions for making careers in the army for medical officers more attractive: (i) that a scheme be worked out under which medical officers be allotted to general practitioners for short periods in order to obtain general practitioner training; (ii) that a scheme be worked out to enable army medical officers to have further hospital training in the teaching hospitals.

MERVYN ARCHDALL MEDICAL MONOGRAPH FUND.

The Honorary Treasurer presented the financial statement of the Mervyn Archdall Medical Monograph Fund for the period ended September 30, 1961. The balance as at December 31, 1960, was £2486 7s. 9d. Further donations since then amounted to £117 15s., the sales of monographs had realized £22 15s. and these amounts with interest had brought the total to £2704 14s. 4d. It was reported that an appeal for further donations had been made during the year through the medium of THE MEDICAL JOURNAL OF AUSTRALIA.

SHIPS' SURGEONS.

In response to further representations from the Federal Council it was reported that the Australian Steamship Owners' Federation had advised of the decision to increase the salary of ships' surgeons to £1500 per annum.

SALARIED MEDICAL OFFICERS.

A letter was received from the Queensland Branch referring to differential rates paid to male and female medical practitioners by the Commonwealth Government. The

Branch Council considered that there should be equality of pay and recommended that Federal Council take up the matter with the Commonwealth Government. The Federal Council reaffirmed its previous policy, that there be no inequality of pay in male and female members of the medical profession having equal qualifications and doing similar work, and resolved that the Commonwealth Public Service Board be advised accordingly.

COMMONWEALTH PUBLIC SERVICE BOARD.

A letter was received from the Victorian Branch requesting that Federal Council take up with the Public Service Board a claim for higher fees for ophthalmic referees. The Federal Council resolved to request the Commonwealth Public Service Board to increase the fees payable to medical referees from £3 3s. to £4 4s.

EXPRESSIONS OF APPRECIATION.

The Vice-President, Dr. A. J. Murray, said that as this was the last meeting of the Federal Council of the British Medical Association in Australia, he wished to take the opportunity to pay a tribute to the work and leadership of the President, Dr. H. C. Colville. The Federal Council members expressed approval of Dr. Murray's remarks.

Dr. W. F. Simmons spoke in appreciative terms of the work of the Secretariat, Dr. J. G. Hunter, Dr. C. J. Ross-Smith and Miss H. Cameron. The following resolution was passed:

That the British Medical Association in Australia wishes to place on record its deep appreciation of the loyal and devoted service rendered to the profession in Australia by Dr. J. G. Hunter, General Secretary, and Miss H. Cameron, Executive Assistant, during their long term in office as members of the Secretariat.

FEDERAL COUNCIL ASSETS.

It was resolved that the assets of the Federal Council of the British Medical Association in Australia be transferred to the Australian Medical Association.

MESSAGE OF APPRECIATION TO THE BRITISH MEDICAL ASSOCIATION.

Reference was made to the imminent severing of direct ties with the Parent Body of the British Medical Association, and it was suggested that a letter of thanks and appreciation should be sent to the Parent Body from the Federal Council of the British Medical Association in Australia before it went out of existence. The following resolution was adopted: "That the following message of appreciation be forwarded to the Parent Body of the British Medical Association:

That Federal Council of the British Medical Association in Australia, meeting for the last time this day, desires that the last item of business in the records should be a message to the Parent Body expressing the appreciation and gratitude of the medical profession in Australia for the assistance and cooperation extended over some eighty years. The Federal Council earnestly hopes that the Australian Medical Association, affiliated with the British Medical Association, will continue the same close and cordial relationship in the years that lie ahead and thereby assist in maintaining the standard and prestige of British medicine overseas."

VOTES OF THANKS.

The thanks of the Federal Council were extended to the Council of the Queensland Branch for its hospitality and for the use of its offices, and to Mr. C. C. Jenkins and Miss J. Finch for their assistance during the meeting, and Dr. R. A. M. Miller and Dr. C. Roe for their hospitality.

The thanks of the meeting were extended to the President, Dr. H. C. Colville, for presiding, and to Dr. J. G. Hunter, Dr. C. J. Ross-Smith and Miss H. Cameron for their services during the meeting.

Australian Medical Congress.

FIRST SESSION, ADELAIDE, MAY, 1962.

THE following information has been supplied by the Executive Committee of the First Session of the Australian Medical Congress, which is to be held in Adelaide from May 19 to 26, 1962.

Accommodation.

The closing date for applications for accommodation during Congress is December 31, 1961. The chairman of the accommodation committee advises that most hotels will not maintain block reservations after the end of January, 1962. In view of the task of the committee in allotting accommodation, it is most necessary that application is made well before this date. Intending members are requested to obtain accommodation at hotels, motels and guest houses only through the Congress office, and this is done by making application for membership through local State secretaries.

Membership.

Applications for membership should not be sent direct to Adelaide. Accompanied by the subscription of £8 8s. plus exchange, they should be sent to the appropriate local State secretary, from whom application forms may be obtained. The local State secretaries are as follows: *New South Wales*: Dr. M. S. Alexander, c/o British Medical Association (N.S.W. Branch), 135 Macquarie Street, Sydney. *Queensland*: Dr. N. C. Davis, Ballow Chambers, Wickham Terrace, Brisbane. *South Australia*: Dr. R. Britten Jones, 175 North Terrace, Adelaide. *Tasmania*: Dr. N. D. Abbott, 175 Macquarie Street, Hobart. *Victoria*: Dr. C. H. Dickson, 426 Albert Street, East Melbourne, C2. *Western Australia*: Dr. C. W. Anderson, 8 Kings Park Road, West Perth.

Dut of the Past.

A COMPULSORY VACCINATION BILL FOR NEW SOUTH WALES.¹

[From the *Australasian Medical Gazette*, September 21, 1903.]

THE N.S.W. Premier (Sir John See) recently laid upon the table of the House memorandum from the President of the Board of Health in regard to smallpox and vaccination. This document states that New South Wales was the only State in the Commonwealth where there is no compulsory Vaccination Act. It might be inferred from that the people were opposed to compulsory vaccination, but the only available evidence went to show that they held no strong opinion on the subject. They appeared not to oppose it, but merely to neglect it. Whenever there was a smallpox scare the number who applied for vaccination for themselves or their children rose remarkably. During the epidemic in Sydney in 1879-80 the vaccinations voluntarily done amounted to nearly 60,000, although before and afterwards the number of people vaccinated in the years when there was no scare was so small in proportion to the total population as to be insignificant. There seemed to be no reason, therefore, for expecting that any great opposition would be offered to the passage of an Act rendering vaccination and revaccination compulsory; and as this State was not merely exposed to disaster itself from the want of such a law, but was consequently a perpetual menace to every other State, the Board of Health would once more urge that the introduction of a Vaccination Bill and the establishment of a calf lymph station should be taken into practical consideration without delay.

Medical Matters in Parliament.

SENATE.

THE following extracts from *Hansard* relate to the proceedings of the Senate.

October 10, 1961.

Lung Cancer.

SENATOR BROWN asked the Minister representing the Prime Minister, upon notice:

1. Is it a fact, as recently stated in the Press, that a booklet discussing the relationship between smoking and lung cancer will be distributed among 200,000 senior school

¹ From the original in the Mitchell Library, Sydney.

students in Victoria? If so (a) Is this a Commonwealth Government, a Victorian State Government or a private enterprise publication? and (b) Will the Prime Minister arrange for copies of the booklet to be made available to members of Parliament?

SENATOR SPOONER: I have the following answer from the Prime Minister:

I understand that the Anti-Cancer Council of Victoria, an organization consisting of non-government and State Government representatives, in association with the Health Education Committee, and with the approval of both the Health and Education Departments of Victoria, will shortly issue to senior school students 200,000 pamphlets on the relationship between smoking and lung cancer. I shall pass on to the Anti-Cancer Council the honorable senator's request that copies of the booklet might be made available to members of Parliament.

Leukæmia.

SENATOR O'BRYNE asked the Minister representing the Prime Minister, upon notice:

1. What has been the incidence of leukæmia over the sixteen years during which atomic and hydrogen bombs have been exploded?

2. Will the Prime Minister arrange for a statement to be prepared for the Australian delegates to the United Nations showing the recent increase in the incidence of this disease so that our delegates may assist in putting a case to the General Assembly for banning the testing and use, above or below the ground, of atomic nuclear devices of all descriptions by countries with a view to relieving mankind of this threat to the present and future health of life on this planet?

SENATOR SPOONER: The Prime Minister supplies the following answers:

1. Leukæmia is not a notifiable disease and therefore no records of its incidence are kept. The only statistics available are those of deaths from the disease. Since 1950 the Commonwealth Bureau of Census and Statistics has followed the procedure of the international statistical classification determined by the World Health Organization which does not distinguish between death from leukæmia and death from aleukæmia. For the purposes of statistical comparison and analysis this procedure has been extended for the whole period under review. For purpose of comparison, figures for the ten years immediately preceding the first nuclear explosion (1935 to 1945) are also included in the following table:

DEATHS FROM LEUKÆMIA AND ALEUKÆMIA—AUSTRALIA.

Year.	Deaths from Leukæmia and Aleukæmia.	Mean Population.	Rate per 100,000 of Mean Population.
1935 ..	168	6,727,613	2.50
1936 ..	182	6,780,803	2.68
1937 ..	207	6,837,590	3.03
1938 ..	189	6,900,341	2.74
1939 ..	185	6,963,726	2.65
1940 ..	221	7,046,661	3.14
1941 ..	227	7,109,982	3.19
1942 ..	210	7,176,639	2.93
1943 ..	239	7,234,651	3.30
1944 ..	228	7,308,706	3.12
1945 ..	246	7,389,406	3.33
1935-45	—	—	2.97
1946 ..	265	7,467,474	3.55
1947 ..	325	7,578,776	4.29
1948 ..	354	7,709,559	4.59
1949 ..	341	7,908,890	4.31
1950 ..	369	8,177,294	4.51
1951 ..	376	8,420,391	4.47
1952 ..	423	8,636,657	4.90
1953 ..	458	8,817,603	5.19
1954 ..	391	8,989,227	4.35
1955 ..	456	9,202,150	4.96
1956 ..	491	9,427,291	5.21
1957 ..	491	9,641,038	5.09
1958 ..	548	9,848,534	5.56
1959 ..	555	10,060,003	5.52
1960 ..	590	10,280,293	5.74
1946-60	—	—	4.87

2. Leukæmia and aleukæmia can both result from excessive radiation. They can also result from other factors. There has been a progressive increase in the incidence of both diseases since 1935. Although the increase has been relatively greater since 1945 than in the preceding decade,

any attempt to relate the increase in leukæmia and aleukæmia to the explosion of nuclear devices would be purely speculative.

The Government shares the desire of other Western countries to conclude an agreement which would result in effectively controlled discontinuance of nuclear weapon tests. The Australian delegation will therefore be instructed to support plans for the discontinuance of nuclear testing taking account for the need for effective control and inspection.

Health.

SENATOR BROWN asked the Minister representing the Minister for Health, upon notice:

1. Has the National Health and Medical Research Council appointed a committee to draw up a national advertising code; if so, is this code to be used to circumvent "quacks" and charlatans?

2. Will genuine health practitioners, who do not conform to ordinary medical practice in the prescribing of pills, potions and drugs, be safeguarded; if so, how?

3. When will the committee's report be made available?

SENATOR HENTY: The Minister for Health has furnished the following replies:

1. The National Health and Medical Research Council has appointed a committee to draw up a national advertising code. The text of this code will be presented to the council at its 52nd session on 2nd and 3rd November, 1961.

2. The interests of reputable advertisers will be adequately safeguarded.

3. The committee's report, with any amendments which the council may desire to include, will be made public as soon as possible after the conclusion of the meeting.

Correspondence.

"PALFUM" RECTAL SUPPOSITORIES FOR POST-OPERATIVE ANALGESIA.

SIR: Recent reports indicate that "Palfum" (dextromoramide) is an effective analgesic whether given orally, rectally as a suppository, or parenterally. It was decided to investigate the use of "Palfum" suppositories for post-operative analgesia to try to minimize the number of injections patients require after operation.

The investigation was carried out in the following manner. The anaesthetic sister was asked to insert a rectal suppository of either "Palfum" (10 mg.) or theobromide before the patient returned to the ward. The patients were told on recovering consciousness to ask the ward sister when they felt the need for pain relief. In this way was measured the duration of the post-operative pain-free period. The ward sisters and the investigators did not know which of the two types of suppository the patients had received. In the control series, ten patients had received theobromide suppositories which do not contain any analgesics. "Palfum" suppositories were inserted into 25 patients of ages varying between 20 to 60 years, who underwent laparotomies (21), thyroidectomy (1), block dissection of axillary glands (1), removal of Bartholin cyst (1), femoral hernia (1). In all cases, the anaesthetics used were thiopentone, nitrous oxide and relaxants.

The patients who received theobromine suppositories required some form of analgesic within one hour of the operation. The patients who had received "Palfum" suppositories were pain-free for periods ranging from four to eight hours after the operation. At no stage were any untoward side effects of this therapy noticed and particular attention was paid to evidence of respiratory depression. Although this is a small series, it indicates that "Palfum" is an effective analgesic when given as a rectal suppository. Its main value by this route will probably be for children, as it will avoid the necessity of parenteral analgesics for some time after operation. The use of a second suppository achieved similar pain relief so that it may be possible to avoid all post-operative injections required for analgesia.

Yours, etc.,

St. Vincent's Hospital,
Sydney.

D. J. O'SULLIVAN.

October 27, 1961.

FLUORIDATION IN HASTINGS, NEW ZEALAND.

SIR: Your report of fluoridation in Hastings, New Zealand, quotes Colonel Fuller to the effect that a 74% reduction in affected teeth occurred. There is no mention of the fact that the control studies were invalid.

I think this sort of false generalizing is preventing public acceptance far more than the fact that "democratic processes have full play". Wherever scientific criticisms of fluoridation are aired in this country, the "elected representatives" turn it down irrespective of their "fear of the ballot box".

Most official bodies make misleading statements to the effect that pro-fluoridation opinions are a "summary of scientific opinion". They consistently exclude opposing responsible opinion in many cases, as the "Basic Notes" recently circulated to Queensland doctors with Health Department approval.

Yours, etc.,
D. EVERINGHAM.

21 East Street,
Rockhampton,
Queensland.
October 29, 1961.

WHY AREN'T CLINICAL MEETINGS MORE POPULAR?

SIR: Who could resist reading "Why Aren't Clinical Meetings More Popular?" (THE MEDICAL JOURNAL OF AUSTRALIA, October 28, 1961), by Dr. F. S. and Dr. M. D. Owen, who courageously discussed the tabu subject of time in presentations? Unfortunately, Drs. Owen's idealism in suggesting 15 minute items was equalled only by the phantasmagorical unreality of their proposition that half the time be for discussion. At first glance, this dichotomy of time into equal parts for speaker and audience resembles a plea on behalf of the inarticulate spectators; but closer examinations shows it could be an ingenious plan to gag the speaker by limiting the subject to 15 minutes and the spectators piously hoping for their 50% which was used up by the speaker. One suspects that the article is an adumbrated allegory on clinical meetings that exist, and one hopes that the authors will not falter in their desire for the spectators' 50%.

Drs. Owen made penetrating comments on slides, rashes and rash dermatologists, clarity of presentations, distractions by extraneous noises (even to moving of telephones), air conditioning (ordinary ventilation not mentioned). It would be interesting to hear them sound out the question of background music before and after clinical meetings. Here was their chance to lure us with muted whisperings of "Clair de lune". Instead of the cacophony and intellectual incongruity of "Bing", Cole Porter ("It had to be You"), can-cans, and a loud quickstep that jazzed us in and jazzed us out unable to hear others talk and ourselves think. And if the meeting place is by the sea, one can have the best background music of all, Nature's *moto perpetuo* playing a timeless song by "the long wash of Australasian shores".

Yours, etc.,
ALAN GRANT.

4 Mawson Avenue,
East Maitland,
New South Wales.
November 5, 1961.

HYPOPHYSECTOMY BY YTTRIUM 90 IMPLANTATION IN SEVERE DIABETES.

SIR: Of interest to the medical profession is a case of a 47 years old male diabetic who had been watched for the past four years, inevitably heading to blindness from a diabetic retinopathy. He was diagnosed as a diabetic in 1934, his insulin dosage being 56 units for some years (40 lente, 16 semilente).

Early this year his visual acuity deteriorated to left 6/60 and right 6/60. His fundi, over the years, have shown the typical stigmata associated with diabetes—exudates, venous haemorrhages and berry aneurysms scattered over the entire retina, but concentrated mainly in the posterior segment, with vitreous fibrous organization resulting from massive haemorrhages. This was particularly so in the left eye, and the final loss of visual acuity was due to further

haemorrhages. As a last desperate hope, this man was sent to Dr. W. Forrest (Western Infirmary, Glasgow), where in May, 1961, an implant of yttrium 90 (half life 36 hours) was placed into the pituitary fossa, thereby destroying the gland.

This recent technique has a far lower mortality, and less stormy convalescence, than surgical hypophysectomy. Briefly, the pituitary gland can be destroyed completely if two rods of ⁹⁰Y (which emits particles of high energy, yet low range), each approximately 5 mc., are inserted into the pituitary fossa so that one lies in the centre of each half of the gland. The avenue of approach is through the nose, sphenoidal sinus and into the sella turcica by a screw method of implantation, each yttrium rod being fixed in position by a screw-threaded base which grips a drill hole in the anterior wall of the sella, while the active rod projects into the gland.

When last seen in October, the patient's vision was right 6/9, left 6/18. His fundi are virtually clear of exudates and haemorrhages, the retinitis proliferans remains (thus visual acuity in the left eye). He is well maintained on 32 units of lente insulin, 37.5 mg. daily of cortisone acetate, and 1 mg. every five days of pitressin tannate, his main complaints being of weakness, that his skin and hair have become finer and of fluid retention. He is back at work as a bank manager and considers a miracle has been performed.

The statistics of hypophysectomy in diabetic subjects show poor results, and this is an isolated case, but it is a pointer to greater hope for the younger diabetic with failing sight.

Yours, etc.,
PHYLIS M. WADDY.
280 Burwood Road,
Burwood,
New South Wales.
November 6, 1961.

GENERAL PHARMACEUTICAL BENEFITS.

SIR: Dr. Herdman Porter, in his letter published in THE MEDICAL JOURNAL OF AUSTRALIA for October 21, 1961, is still endeavouring to reconcile the Australian *retail* price of "Androstanolone" with the British *wholesale* price of that substance. The additional £1 11s. Dr. Herdman Porter cannot account for is merely the difference between the National Health Service dispensed price and the privately dispensed price.

Yours, etc.,
FOR MUIR & NEIL PTY. LTD.,
J. R. B. NEIL, B.Sc.,
Managing Director.

Post-Graduate Work.

THE POST-GRADUATE COMMITTEE IN MEDICINE IN THE UNIVERSITY OF SYDNEY.

Advanced Correspondence Course in Electrocardiography.

THE Post-Graduate Committee in Medicine in the University of Sydney has completed arrangements with the School of Medicine, University of Southern California, whereby the Committee will distribute in Australia, New Zealand and the Pacific Islands the University's advanced home course in electrocardiography. The course consists of 52 weekly lessons, and is designed to meet the needs of the physician who has already gained facility and has a strong foundation in electrocardiographic interpretation, but desires prolonged weekly supervised practice to maintain and improve his skill. Each week for a year, six unknown tracings with the clinical histories will be presented for study. A detailed description, interpretation and explanation will be sent the following week. Correspondence and comments arising out of the course will be dealt with by the Committee's electrocardiographic course supervisor. The fee for the course will be 40 guineas. It is anticipated that distribution of the lessons will begin in early 1962. Subscriptions and inquiries should be addressed to the Course Secretary, The Post-Graduate Committee in Medicine, Herford House, 188 Oxford Street, Paddington. Telephone: FA 0671.

Naval, Military and Air Force.**APPOINTMENTS.**

THE following appointments, changes, etc., are published in the *Commonwealth of Australia Gazette*, No. 76, of October 5, 1961.

AUSTRALIAN MILITARY FORCES.**Citizen Military Forces.****Northern Command.**

Royal Australian Army Medical Corps (Medical).—The provisional appointments of the following officers are terminated on the dates shown:—Captains 267481 J. E. Binnie, 4th September, 1960, 162952 J. C. Pye, 1st September, 1961, 161909 A. D. Campbell, 29th September, 1961, and 155872 A. Ottone, 26th October, 1961. *To be Captain (provisionally), 5th September, 1960*—267481 John Edward Binnie.

Eastern Command.

Royal Australian Army Medical Corps (Medical).—The Army number of 251888 Captain (provisionally) B. M. Dwyer is as now shown for all purposes of military records and not as described in the notification respecting this officer which appeared in Ex. Min. No. 65 of 1961, promulgated in the Commonwealth of Australia Gazette No. 64 of 1961.

Reserve Citizen Military Forces.**Northern Command.**

Royal Australian Army Medical Corps (Medical).—*To be Honorary Captains*—James Cecil Pye, 2nd September, 1961; Alexander Denis Campbell, 30th September, 1961, and Alfio Ottone, 27th October, 1961.

Southern Command.

The following officers are placed upon the Retired List (Southern Command) and granted a military title equivalent to the substantive or honorary rank shown, with permission to wear the prescribed uniform, 31st August, 1961:—

Royal Australian Army Medical Corps (Medical).—Lieutenant-Colonel J. E. Sewell, Major A. L. Newson and Captain A. G. C. Budge.

Royal Australian Army Medical Corps (Medical).—Honorary Captains R. D. Buntine and G. T. D. Watson are retired, 31st August, 1961. The notification respecting Honorary Captain E. Wilder which appeared in Ex. Min. No. 75 of 1961, promulgated in the Commonwealth of Australia Gazette No. 69 of 1961, is withdrawn.

ROYAL AUSTRALIAN AIR FORCE.**Permanent Air Force.****Medical Branch.**

The resignation of Squadron Leader E. R. Bowler (0310759) is accepted, 17th August, 1961.

The probationary appointment of Flight Lieutenant A. E. Greentree (022681) is confirmed.

Flying Officer A. Kaufer (055421) is promoted to the rank of Flight Lieutenant, 15th July, 1961.

Active Citizen Air Force.**Medical Branch.**

No. 23 (City of Brisbane) (Auxiliary) Squadron.—Flight Lieutenant C. F. Winzar (016745) is transferred from the Reserve, 16th November, 1960.

No. 25 (City of Perth) (Auxiliary) Squadron.—Bryant Allen Ribbey Stokes (042969) is appointed to a commission, 1st July, 1961, with the rank of Flight Lieutenant.

Air Force Reserve.**Medical Branch.**

Each of the following Air Cadets is provisionally appointed to a commission with the rank of Pilot Officer:—Albert Singer (0220607), Raymond Peter Stettaford (0211745), Graham Miles Heazlewood Piper (0211806), Robert Bruce Allen (0314823), 1st July, 1961; Warren John Wilson (016503), Michael Terence Powell (016539), 12th July, 1961.

DISEASES NOTIFIED IN EACH STATE AND TERRITORY OF AUSTRALIA FOR THE WEEK ENDED NOVEMBER 4, 1961.¹

Disease.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.	Australian Capital Territory.	Australia.
Acute Rheumatism			1(1)	1					2
Amoebiasis									6
Ancylostomiasis									
Anthrax									
Bilharziasis									
Brucellosis									
Cholera									
Chorea (St. Vitus)		1							
Dengue									1
Diarrhoea (Infantile)	4(2)	10(9)	5(2)		1(1)		1	1	22
Diphtheria									
Dysentery (Bacillary)		4(2)	1(1)		6		1		12
Encephalitis									
Filariasis									
Homologous Serum Jaundice									
Hydatid									
Infective Hepatitis	155(57)	50(25)	25(10)	28(12)	4(2)	10(3)	1	3	276
Lead Poisoning									
Leprosy									1
Leptospirosis			3				1		
Malaria		1(1)	1						2
Meningococcal Infection									
Ophthalmia					4				4
Ornithosis									
Paratyphoid									
Plague									
Pollomyelitis	5		5(4)	4(3)					
Puerperal Fever	2(2)		1						14
Rubella		19(13)	2(1)		2(2)	2(1)		5	31
Salmonella Infection		8(2)	6(3)	2(1)	2(2)			2	15
Scarlet Fever					2				
Smallpox									
Tetanus			1(1)						
Trachoma						10	1		2
Trichinosis									11
Tuberculosis		25(9)	9(8)	4	15(13)	8(5)	4(3)		65
Typhoid Fever						1			1
Typhus (Flea-, Mite- and Tick-borne)									
Typhus (Louse-borne)									
Yellow Fever									

¹ Figures in parentheses are those for the metropolitan area.

The appointment of each of the following officers is terminated, 1st September, 1961:—Flight Lieutenants E. A. Eddy (255903), H. E. Williams (265176); Flying Officer S. V. Hagley (141903).

British Medical Association.

MERVYN ARCHDALL MEDICAL MONOGRAPH FUND.

THE following is a further list of donations received for the Mervyn Archdall Medical Monograph Fund. The previous list was published in the issue of September 23, 1961.

	f s. d.
Dr. William A. R. Thomson (editor, <i>The Practitioner</i> , London)	1 5 0
Previously acknowledged	117 15 0
Total to date	119 0 0

Medical Practice.

NATIONAL HEALTH ACT.

THE following notice is published in the *Commonwealth of Australia Gazette*, No. 82, of October, 1961.

NATIONAL HEALTH ACT 1953-1961.

Notice under Section 134A.

Notice is hereby given that following investigation and report by the Medical Services Committee of Inquiry for the State of Queensland concerning the conduct of Anthony Alder Kelly of 154 Adelaide-street, Maryborough, medical practitioner, I, Donald Alastair Cameron, Minister of State for Health, did, on the 27th day of September 1961, reprimand the said Anthony Alder Kelly for conduct which is a contravention of the said Act.

Dated this 27th day of September, 1961.

DONALD A. CAMERON,
Minister of State for Health.

Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Ingham, Donald Charles, M.B., Ch.B., 1956 (Univ. Edinburgh), 379 Port Hacking Road, Caringbah.
Kainer, Yaaqov, M.D., 1940 (Univ. Lausanne, Switzerland), licensed under Section 21c (3), *Medical Practitioners Act*, 1938 (as amended), Yasmar Child Guidance Clinic, 185 Parramatta Road, Haberfield.
Smith, Robert Darlow, M.B., B.S., 1952 (Univ. Sydney), F.R.C.S. (Eng.), 1956, F.R.C.S. (Edin.), 1956, F.R.A.C.S., 1959, 149 Macquarie Street, Sydney.
Uren, David Henry, M.B., B.S., 1961 (Univ. Sydney), Prince Henry Hospital, Little Bay.
Logan, John Wride, M.B., B.S., 1960 (Univ. Sydney), Royal North Shore Hospital, St. Leonards.
Kohan, Armand Leon, M.D., 1949 (Univ. Bucharest), registered under Section 17 (2), *Medical Practitioners Act*, 1938 (as amended), 34 Arden Street, Waverley.

THE undermentioned has applied for election as a member of the South Australian Branch of the British Medical Association:

Lines, David Robin, M.B., B.S., 1961 (Univ. Adelaide), 24 Avenel Gardens Road, Medindie.

Deaths.

THE following deaths have been announced:

GLADSTONE.—John Henry Gladstone, on November 6, 1961, at Melbourne, Victoria.

EVANS.—Margaret Evans, on November 7, 1961, at West Brookton, Western Australia.

MACQUEEN.—Donald MacQueen, on November 9, 1961, at Kalgoorlie, Western Australia.

Diary for the Month.

NOVEMBER 28.—New South Wales Branch, B.M.A.: Hospitals Committee.
NOVEMBER 30.—New South Wales Branch, B.M.A.: Branch Meeting.
NOVEMBER 30.—South Australian Branch, B.M.A.: Scientific Meeting.
DECEMBER 5.—New South Wales Branch, B.M.A.: Organization and Science Committee, 8 p.m. (with Special Groups, 8.30 p.m.).
DECEMBER 6.—New South Wales Branch, B.M.A.: Public Relations Committee.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Medical Secretary, 135 Macquarie Street, Sydney): Medical Officers to Sydney City Council. All contract practice appointments in New South Wales. Members are requested to consult the Medical Secretary before undertaking practice in dwellings owned by the Housing Commission.

South Australian Branch (Honorary Secretary, 80 Brougham Place, North Adelaide): All contract practice appointments in South Australia.

Editorial Notices.

ALL articles submitted for publication in this Journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations, other than those normally used by the Journal, and not to underline either words or phrases.

Authors of papers are asked to state for inclusion in the title their principal qualifications as well as their relevant appointment and/or the unit, hospital or department from which the paper comes.

References to articles and books should be carefully checked. In a reference to an article in a journal the following information should be given: surname of author, initials of author, year, full title of article, name of journal, volume, number of first page of article. In a reference to a book the following information should be given: surname of author, publisher, place of publication, page number (where relevant). The abbreviations used for the titles of journals are those of the list known as "World Medical Periodicals" (published by the World Medical Association). If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full data in each instance.

Authors submitting illustrations are asked, if possible, to provide the originals (not photographic copies) of line drawings, graphs and diagrams, and prints from the original negatives of photomicrographs. Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary is stated.

ALL communications should be addressed to the Editor, THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales. (Telephones: 63-2651-2-3.)

Members and subscribers are requested to notify the Manager, THE MEDICAL JOURNAL OF AUSTRALIA, Seamer Street, Glebe, New South Wales, without delay, of any irregularity in the delivery of this Journal. The management cannot accept any responsibility or recognize any claim arising out of non-receipt of journals unless such notification is received within one month.

SUBSCRIPTION RATES.—Medical students and others not receiving THE MEDICAL JOURNAL OF AUSTRALIA in virtue of membership of the Branches of the British Medical Association in Australia can become subscribers to the Journal by applying to the Manager or through the usual agents and booksellers. Subscriptions can commence at the beginning of any quarter and are renewable on December 31. The rate is £6 per annum within Australia and the British Commonwealth of Nations, and £7 10s. per annum within America and foreign countries, payable in advance.